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APPENDICES

A. Operating Temperature

Table A1 Pyrolysis conditions: non-catalytic pyrolysis

Tire = 30 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	32.6	28.3	32	389.9	501.0	62	367.8	495.3	92	342.0	495.0
4	51.1	43.9	34	389.9	500.3	64	366.1	506.1	94	345.9	499.6
6	78.9	71.1	36	389.1	499.4	66	366.5	498.7	96	344.7	498.9
8	113.6	107.3	38	390.5	501.8	68	361.7	501.0	98	338.3	501.1
10	154.7	153.7	40	379.1	497.8	70	362.2	495.8	100	341.3	499.0
12	200.5	206.2	42	381.7	502.6	72	357.4	501.1	102	336.1	500.2
14	251.7	268.5	44	383.3	494.3	74	354.4	498.7	104	334.5	500.5
16	301.2	332.8	46	376.7	508.9	76	353.0	502.7	106	335.0	500.6
18	315.6	411.6	48	375.1	501.0	78	354.4	503.2	108	331.7	500.8
20	330.7	458.9	50	373.5	508.3	80	351.6	501.0	110	339.0	498.5
22	350.5	468.8	52	377.1	495.9	82	350.3	493.3	112	331.6	500.4
24	355.3	501.8	54	375.3	492.2	84	347.8	506.9	114	328.4	500.4
26	363.2	494.6	56	372.2	506.8	86	351.2	500.4	116	329.6	499.8
28	375.1	497.8	58	372.2	500.4	88	348.3	506.6	118	328.2	504.4
30	385.3	506.0	60	367.1	503.5	90	347.6	499.3	120	327.8	497.0

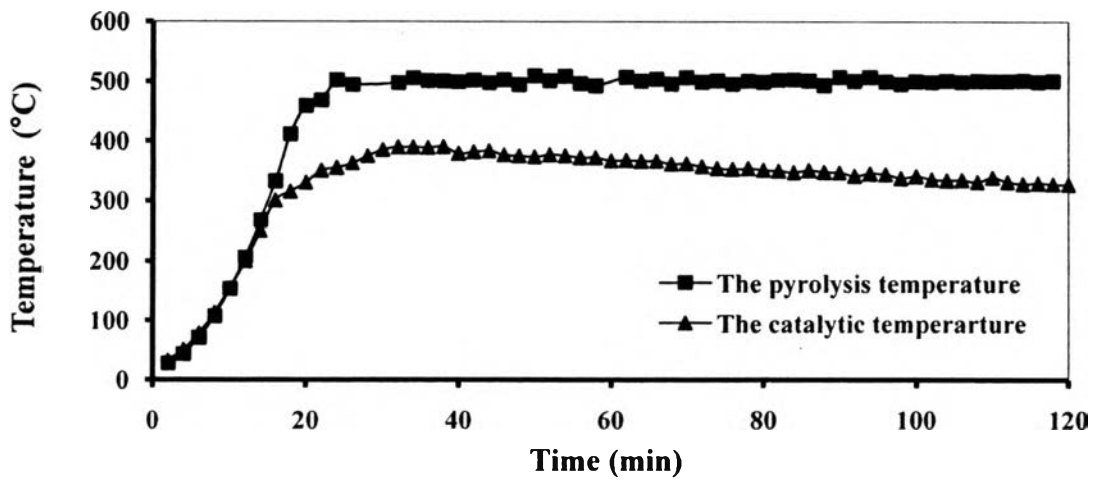

Figure A1 Operating temperature vs time on stream of non-catalytic pyrolysis.

Table A2 Pyrolysis conditions: non-catalytic pyrolysis

Tire = 30 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	31.9	25.7	32	379.1	523.2	62	303.2	504.2	92	308.3	496.0
4	53.4	37.7	34	370.2	502.7	64	306.7	494.0	94	311.5	507.4
6	96.0	69.3	36	363.8	505.4	66	301.5	504.3	96	313.1	496.0
8	112.2	82.2	38	354.0	501.9	68	297.4	498.1	98	314.5	505.4
10	162.2	127.7	40	340.5	485.0	70	305.9	506.1	100	314.2	499.6
12	241.7	179.4	42	336.8	470.4	72	305.8	498.9	102	314.8	502.7
14	250.8	220.6	44	334.9	452.5	74	310.7	505.0	104	315.1	494.1
16	301.4	284.8	46	323.6	441.3	76	307.7	501.0	106	314.3	499.9
18	317.7	374.6	48	320.5	452.3	78	306.5	492.0	108	304.8	494.8
20	322.5	402.0	50	316.9	497.4	80	301.0	502.2	110	301.7	504.9
22	345.5	479.2	52	317.2	505.7	82	303.5	499.8	112	298.4	497.5
24	347.2	480.6	54	309.4	498.4	84	305.7	494.2	114	308.9	501.6
26	363.7	492.2	56	303.7	493.0	86	300.5	503.3	116	309.7	495.3
28	376.5	488.1	58	303.4	500.5	88	296.6	502.6	118	312.7	505.8
30	376.9	518.9	60	300.0	500.4	90	299.4	503.6	120	312.9	502.2

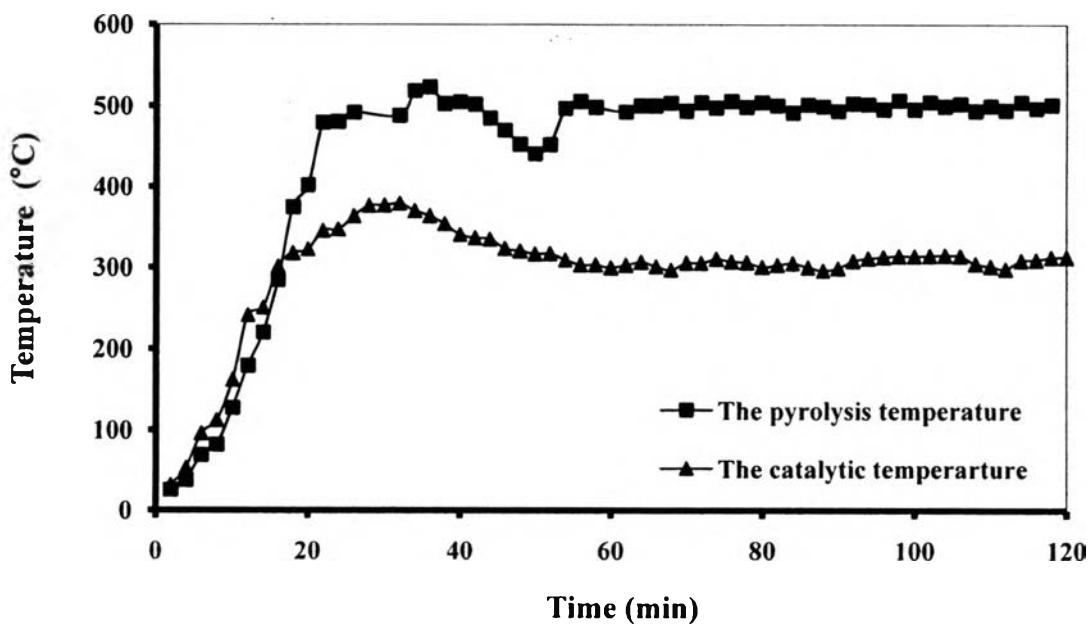

Figure A2 Operating temperature vs time on stream of non-catalytic pyrolysis.

Table A3 Pyrolysis conditions: catalytic pyrolysis using KL

Tire = 30 g, KL = 7.5 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.3	28.4	32	369.8	504.9	62	357.4	505.4	92	335.0	498.7
4	38.7	42.4	34	372.2	499.5	64	355.8	500.4	94	333.3	499.9
6	50.4	61.5	36	372.2	504.3	66	353.8	501.4	96	331.1	504.9
8	69.4	95.5	38	374.3	485.3	68	352.3	494.8	98	327.8	497.5
10	93.0	137.0	40	374.1	501.6	70	350.5	506.3	100	325.9	504.5
12	124.6	186.9	42	373.7	500.5	72	349.0	499.7	102	325.0	495.8
14	166.5	252.7	44	372.2	506.2	74	347.1	504.1	104	323.4	502.3
16	195.9	302.6	46	370.6	496.2	76	346.0	495.9	106	322.6	500.8
18	238.0	390.9	48	369.1	504.8	78	344.1	507.0	108	321.1	497.8
20	299.7	439.9	50	367.5	498.7	80	342.6	501.4	110	320.7	494.3
22	323.1	477.5	52	366.3	502.1	82	341.9	500.6	112	319.3	506.5
24	349.6	512.2	54	364.5	496.0	84	340.1	496.2	114	318.8	497.9
26	359.8	500.4	56	362.9	505.8	86	338.9	507.2	116	317.8	503.8
28	363.5	504.4	58	361.0	499.6	88	337.2	499.4	118	316.9	495.3
30	366.8	497.0	60	359.6	498.8	90	336.3	506.5	120	316.0	506.3

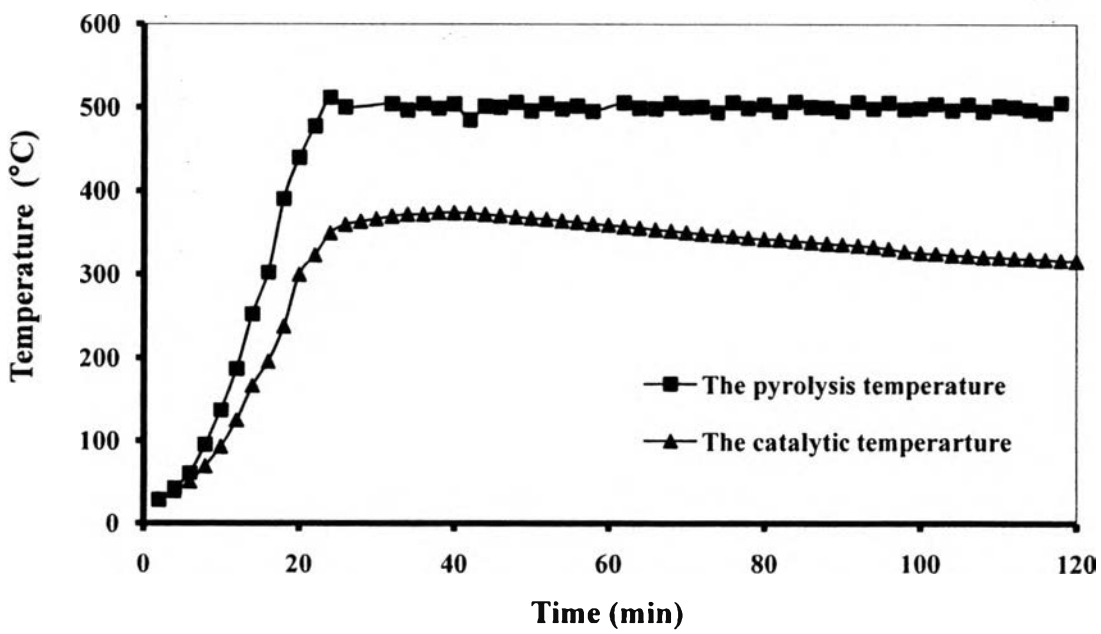

Figure A3 Operating temperature vs time on stream of KL zeolite.

Table A4 Pyrolysis conditions: catalytic pyrolysis using KL

Tire = 30 g, KL = 7.5 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	27.1	28.5	32	369.1	498.2	62	355.8	500.7	92	331.8	498.4
4	33.4	41.0	34	373.1	504.9	64	354.3	502.1	94	330.5	495.5
6	46.8	66.7	36	373.8	497.6	66	352.5	497.3	96	329.2	504.9
8	62.9	98.2	38	373.3	505.6	68	351.2	504.1	98	328.6	496.9
10	87.5	114.6	40	373.0	495.2	70	349.2	498.7	100	326.5	501.9
12	117.8	193.0	42	372.7	504.6	72	347.5	504.4	102	322.7	497.7
14	158.3	262.4	44	371.3	497.2	74	345.8	495.2	104	324.7	506.8
16	189.5	313.4	46	370.4	502.1	76	343.0	497.0	106	323.6	497.9
18	233.5	394.8	48	368.9	492.0	78	342.0	504.1	108	321.4	504.0
20	302.5	445.4	50	367.2	500.6	80	340.5	501.5	110	321.8	496.1
22	332.3	484.7	52	366.0	502.3	82	339.4	504.6	112	321.4	495.2
24	354.5	513.2	54	364.0	501.7	84	337.4	492.5	114	319.5	499.4
26	358.8	507.9	56	361.2	495.9	86	336.0	500.8	116	319.1	500.0
28	364.7	500.5	58	359.9	494.2	88	334.8	501.0	118	318.3	499.9
30	366.9	506.0	60	358.2	507.2	90	333.2	503.6	120	317.8	501.5

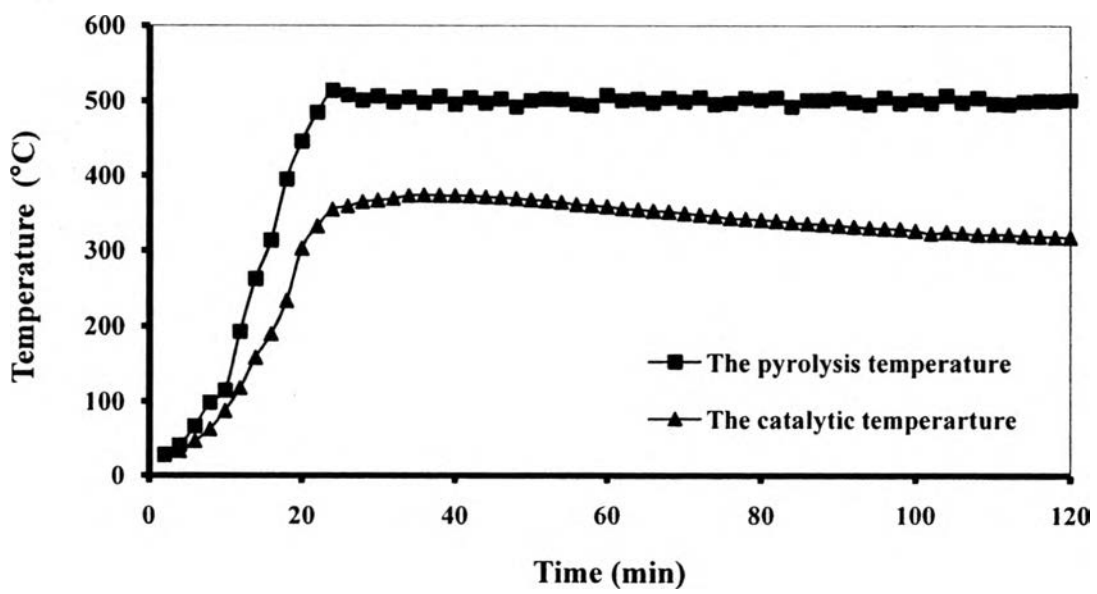

Figure A4 Operating temperature vs time on stream of KL zeolite.

Table A5 Pyrolysis conditions: catalytic pyrolysis using Y

Tire = 30 g, Y = 7.5 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	35.8	40.9	32	357.4	502.0	62	346.6	500	92	327.1	504.8
4	48.4	60.5	34	359.1	502.9	64	345	505.9	94	326.6	499.3
6	65.5	93.2	36	357.7	504.8	66	343.3	496.3	96	325.3	501.9
8	88.5	132.8	38	357.7	502.6	68	341.6	507	98	324.9	495.9
10	120.7	180.8	40	356.0	492.0	70	340.4	499.4	100	323.9	502.5
12	160.6	234.0	42	355.6	499.7	72	338.9	508.5	102	322.6	502.1
14	204.1	292.6	44	355.6	499.8	74	337.3	498.9	104	322.1	499.6
16	250.5	368.6	46	355.1	500.3	76	335.6	498.6	106	320	506.6
18	321.7	429.8	48	354.7	501.4	78	334.5	503.6	108	319.2	497.5
20	330.4	477.3	50	354.2	494.0	80	333.2	502.9	110	318.7	503.7
22	345.1	514.3	52	353.0	506.7	82	331.9	500	112	317.5	494.4
24	350.6	506.7	54	352.3	500.3	84	330.4	504.6	114	316.7	506.3
26	352.6	500.0	56	350.6	506.5	86	330.1	500.2	116	316.1	500.2
28	353.7	501.0	58	349.3	496.4	88	328.4	507	118	315.2	506
30	354.1	490.6	60	347.6	506.1	90	327.9	498.4	120	314.8	497.3

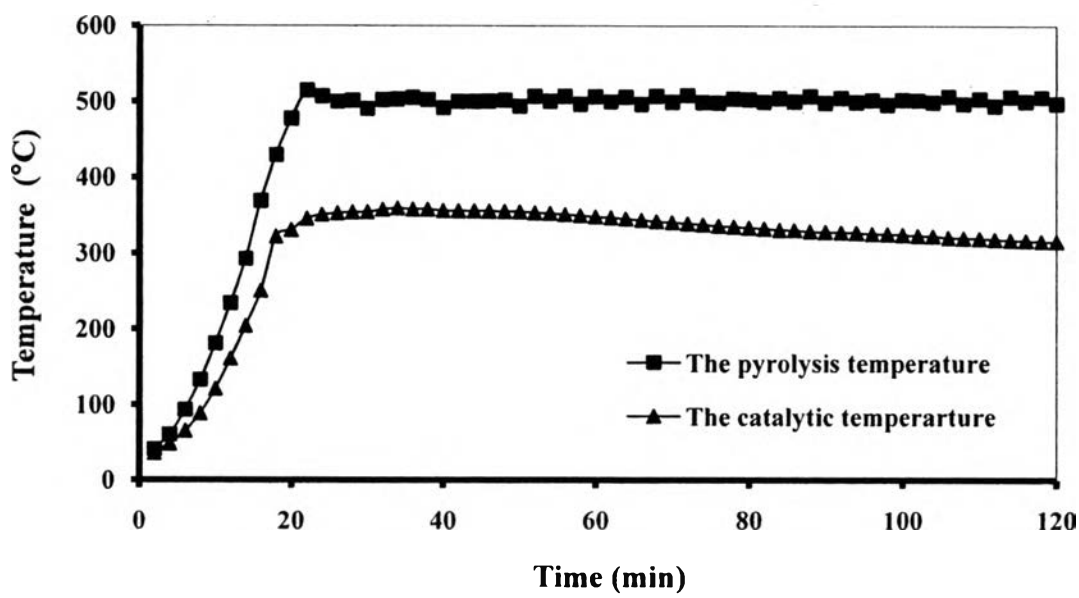

Figure A5 Operating temperature vs time on stream of Y zeolite.

Table A6 Pyrolysis conditions: catalytic pyrolysis using Y

Tire = 30 g, Y = 7.5 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	26.3	23.9	32	340.0	494.9	62	316.2	505.6	92	308.8	506.6
4	31.9	28.6	34	344.2	502.9	64	314.2	499.5	94	308.0	499.3
6	44.1	41.7	36	345.7	500.4	66	312.6	502.8	96	306.0	506.4
8	59.1	59.9	38	341.9	500.7	68	312.0	503.1	98	304.3	496.6
10	82.8	92.1	40	343.9	494.4	70	310.4	501.2	100	298.8	506.6
12	111.1	127.5	42	342.6	505.4	72	309.0	505.2	102	299.1	499.0
14	149.3	175.7	44	341.7	504.3	74	307.2	496.4	104	310.3	501.3
16	200.1	239.5	46	339.2	505.1	76	305.4	506.0	106	313.9	496.7
18	234.7	299.9	48	337.5	500.3	78	303.0	497.8	108	314.3	505.6
20	310.5	399.9	50	334.9	491.9	80	300.0	505.2	110	317.0	500.3
22	332.4	487.0	52	331.0	489.3	82	299.4	493.9	112	315.5	501.3
24	337.0	517.3	54	327.8	504.8	84	306.4	504.4	114	312.5	505.5
26	344.5	508.3	56	324.8	498.2	86	309.6	502.9	116	309.7	499.4
28	338.4	497.3	58	322.3	504.8	88	310.4	505.1	118	307.2	504.1
30	339.4	503.7	60	319.6	494.0	90	310.0	496.0	120	305.0	495.9

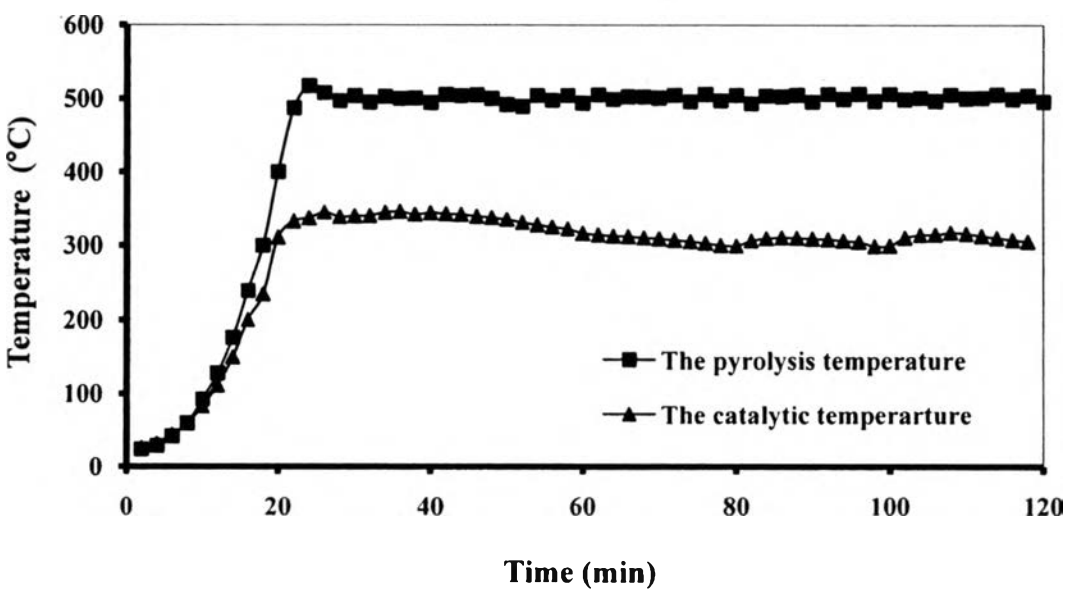

Figure A6 Operating temperature vs time on stream of Y zeolite.

Table A7 Pyrolysis conditions: catalytic pyrolysis using Y and KL (Y + KL at $Ø_{KL}$ = 0.25)

Tire = 30 g, KL = 1.875, Y = 5.625, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.3	26.5	32	352.8	496.6	62	322.6	501.8	92	307.3	498.4
4	36.0	33.1	34	353.1	504.6	64	320.7	493.1	94	309.3	501.5
6	49.6	49.5	36	350.9	497.7	66	318.3	505.5	96	309.1	494.3
8	66.4	72.2	38	348.2	500.3	68	316.6	497.0	98	308.4	507.3
10	91.6	105.2	40	346.0	488.5	70	315.2	504.0	100	307.3	498.7
12	123.3	146.9	42	343.6	499.7	72	312.8	492.4	102	306.3	503.6
14	165.2	200.9	44	342.2	502.6	74	310.7	506.3	104	304.8	494.6
16	205.8	256.4	46	340.4	503.4	76	309.4	497.3	106	303.3	506.1
18	254.0	333.3	48	338.6	498.4	78	307.4	502.3	108	302.1	497.4
20	318.5	419.4	50	336.4	506.1	80	305.9	493.7	110	300.4	503.1
22	337.9	483.3	52	334.8	500.4	82	303.6	506.9	112	298.3	493.8
24	351.2	511.3	54	332.2	503.5	84	304.2	499.2	114	296.4	507.6
26	356.9	511.2	56	329.8	494.1	86	300.2	505.4	116	298.8	500.2
28	356.6	499.6	58	327.1	506.2	88	298.4	495.1	118	303.4	503.9
30	355.2	505.2	60	325.5	497.3	90	304.4	505.2	120	312.3	496.5

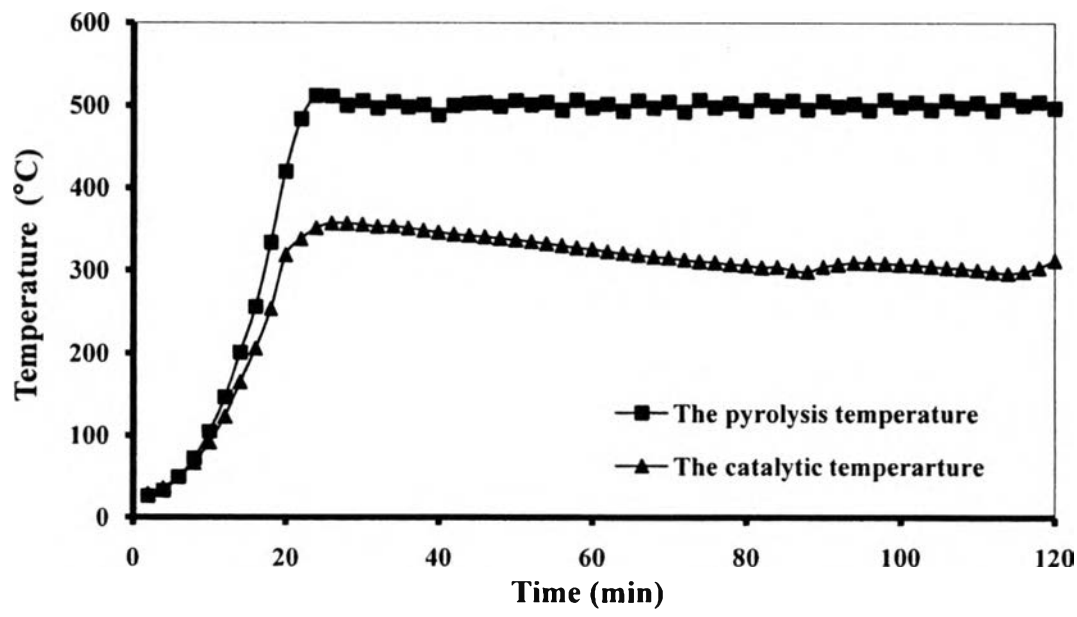

Figure A7 Operating temperature vs time on stream of Y + KL at $Ø_{KL}$ = 0.25.

Table A8 Pyrolysis conditions: catalytic pyrolysis using Y and KL (Y + KL at $Ø_{KL}$ = 0.5)

Tire = 30 g, KL = 3.75, Y = 3.75, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	28.0	28.6	32	348.4	506.3	62	312.5	504.2	92	306.4	502.2
4	35.4	42.5	34	350.2	501.4	64	309.6	494.6	94	308.1	503.8
6	49.4	68.0	36	350.6	501.0	66	306.4	506.6	96	301.7	498.4
8	66.8	102.1	38	348.5	496.1	68	302.9	502.0	98	299.5	504.8
10	92.6	149.3	40	344.6	501.6	70	301.1	500.6	100	297.4	494.6
12	125.5	203.7	42	342.3	502.3	72	298.3	507.4	102	299.5	505.5
14	159.9	257.7	44	339.9	504.7	74	306.0	500.2	104	309.7	499.1
16	205.2	327.3	46	336.1	493.0	76	309.3	502.4	106	313.8	500.7
18	250.8	403.9	48	333.4	502.0	78	312.4	496.9	108	314.0	493.4
20	319.4	458.3	50	331.3	501.2	80	313.7	506.5	110	313.0	506.9
22	346.4	499.6	52	322.8	504.9	82	314.4	497.8	112	310.3	498.4
24	350.7	512.2	54	325.1	500.1	84	313.1	503.4	114	309.0	506.1
26	352.0	501.8	56	321.4	492.2	86	311.3	494.3	116	307.3	498.5
28	350.4	501.3	58	318.9	506.9	88	310.1	505.1	118	302.7	499.7
30	349.3	496.7	60	315.1	496.7	90	308.3	497.4	120	300.5	504.3

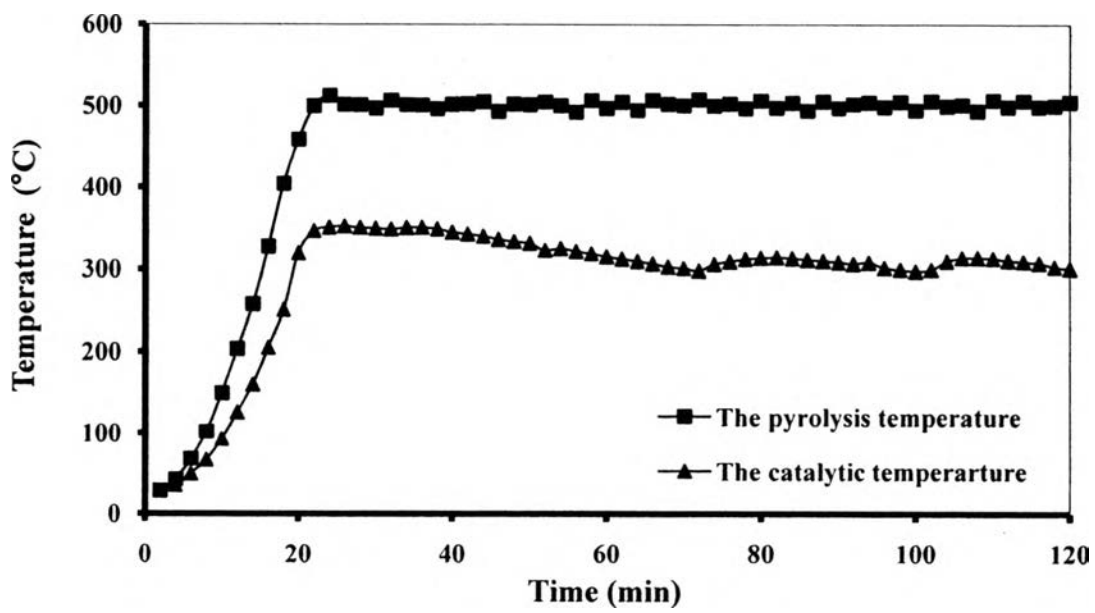

Figure A8 Operating temperature vs time on stream of Y + KL at $Ø_{KL}$ = 0.5.

Table A9 Pyrolysis conditions: catalytic pyrolysis using Y and KL (Y + KL at $Ø_{KL}$ = 0.75)

Tire = 30 g, KL = 5.625, Y = 1.875, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.1	27.6	32	351.9	493.6	62	314.2	498.8	92	312.6	504.5
4	40.1	43.8	34	347.6	506.2	64	311.1	501.9	94	312.4	495.6
6	54.2	66.7	36	347.8	500.0	66	308.9	496.1	96	312.9	506.5
8	72.3	96.6	38	346.2	501.2	68	305.3	506.8	98	312.8	495.4
10	101.0	146.4	40	343.1	508.9	70	303.8	499.7	100	312.2	498.2
12	134.0	196.7	42	342.0	505.8	72	301.2	507.8	102	311.5	503.3
14	170.8	253.7	44	340.0	504.2	74	299.1	498.5	104	309.9	500.9
16	225.7	349.7	46	339.4	501.2	76	302.2	506.5	106	308.4	501.0
18	270.0	427.1	48	337.3	491.2	78	307.2	498.0	108	305.2	494.7
20	319.3	459.7	50	333.0	496.7	80	309.4	501.7	110	303.3	505.5
22	338.4	505.8	52	330.2	504.2	82	309.8	495.0	112	301.4	499.0
24	342.2	509.1	54	325.8	502.9	84	310.5	505.6	114	299.6	504.3
26	342.3	506.7	56	323.9	501.6	86	311.4	499.4	116	297.1	493.8
28	345.8	504.2	58	320.0	491.2	88	311.5	504.5	118	299.9	508.6
30	344.9	503.7	60	316.8	506.6	90	312.7	496.3	120	307.9	503.4

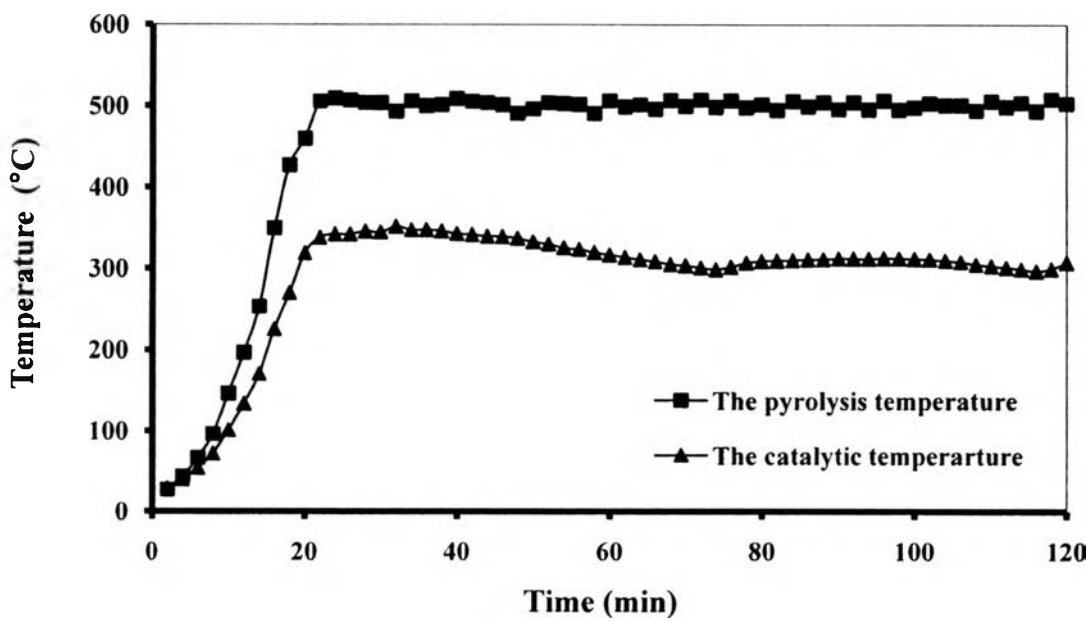

Figure A9 Operating temperature vs time on stream of Y + KL at $Ø_{KL}$ = 0.75.

Table A10 Pyrolysis conditions: catalytic pyrolysis using Y and KL (Y ---> KL at $Ø_{KL}$ = 0.25)

Tire = 30 g, KL = 1.875, Y = 5.625, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.1	29.9	32	343.7	496.5	62	318.8	502.6	92	305.2	500.2
4	41.4	51.1	34	340.3	500.0	64	314.9	493.2	94	311.0	503.5
6	51.7	69.2	36	333.2	477.8	66	310.6	507.1	96	313.4	490.8
8	78.6	116.3	38	329.4	473.9	68	309.6	503.2	98	314.1	497.9
10	104.2	156.3	40	323.4	494.4	70	305.0	501.5	100	310.9	498.8
12	132.9	203.9	42	317.8	497.4	72	299.0	498.7	102	307.5	502.7
14	190.2	291.1	44	314.1	503.4	74	298.9	507.6	104	302.2	493.4
16	215.6	327.0	46	308.2	490.9	76	300.3	503.3	106	299.7	504.0
18	264.3	410.4	48	303.1	497.9	78	308.6	505.4	108	298.8	504.3
20	328.9	454.6	50	300.1	503.6	80	311.2	493.9	110	306.7	505.4
22	342.0	497.6	52	298.0	508.1	82	309.8	499.0	112	311.8	507.8
24	347.7	498.0	54	308.4	503.2	84	309.6	498.5	114	312.8	496.4
26	349.2	500.6	56	315.1	493.6	86	306.8	503.3	116	312.0	500.8
28	349.3	495.6	58	316.6	504.6	88	300.1	504.4	118	310.4	498.0
30	346.2	501.4	60	318.6	495.4	90	298.1	504.2	120	307.8	500.0

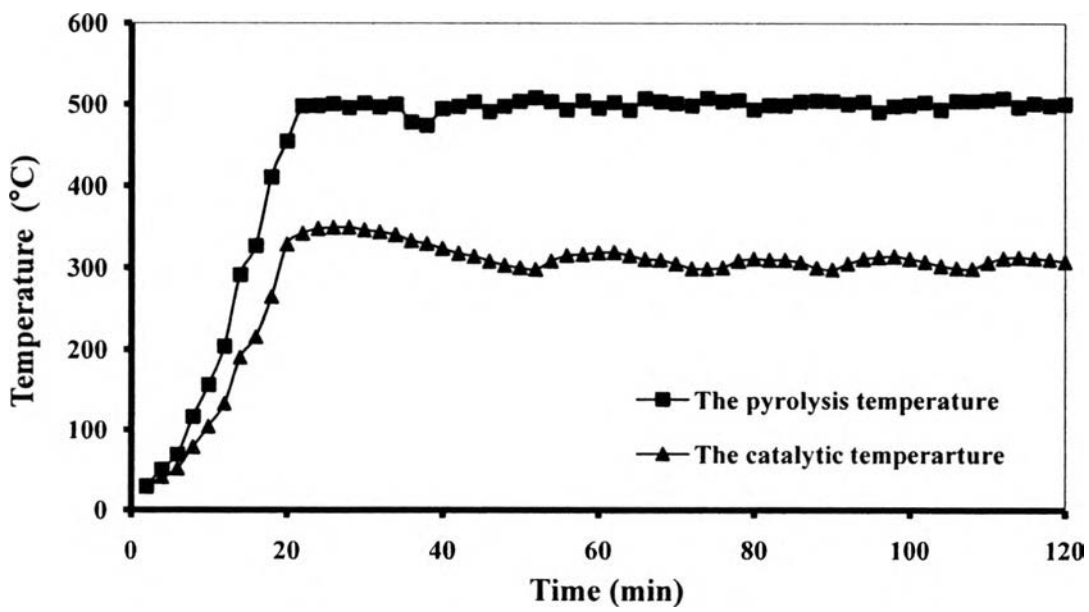

Figure A10 Operating temperature vs time on stream of Y ---> KL at $Ø_{KL}$ = 0.25.

Table A11 Pyrolysis conditions: catalytic pyrolysis using Y and KL (Y ---> KL at $Ø_{KL}$ = 0.5)

Tire = 30 g, KL = 3.75, Y = 3.75, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	28.9	29.7	32	337.7	464.3	62	318.7	499.4	92	313.6	497.2
4	36.8	45.6	34	346.0	455.6	64	316.9	504.1	94	312.9	501.9
6	47.9	68.7	36	342.6	463.0	66	315.0	493.2	96	311.2	494.4
8	64.4	100.4	38	341.5	485.1	68	312.6	504.2	98	310.0	501.6
10	89.4	144.3	40	342.9	495.7	70	309.6	498.2	100	309.0	498.6
12	130.2	208.8	42	342.3	497.3	72	307.5	499.9	102	306.6	497.7
14	159.2	248.6	44	340.6	498.5	74	306.4	500.0	104	304.1	505.7
16	194.2	316.4	46	338.2	505.0	76	304.4	504.4	106	302.2	501.8
18	240.7	401.5	48	336.0	498.5	78	301.8	504.1	108	300.8	496.2
20	299.5	430.6	50	333.7	498.1	80	300.3	494.4	110	298.2	507.9
22	327.8	476.6	52	329.4	505.2	82	298.6	500.8	112	298.1	499.4
24	339.4	503.6	54	326.7	496.4	84	305.0	500.0	114	305.5	502.2
26	349.7	502.7	56	325.2	504.1	86	308.8	502.7	116	311.4	492.2
28	349.0	490.9	58	322.6	492.2	88	311.6	495.4	118	313.4	508.9
30	347.4	476.1	60	320.9	498.7	90	313.1	505.2	120	313.8	498.7

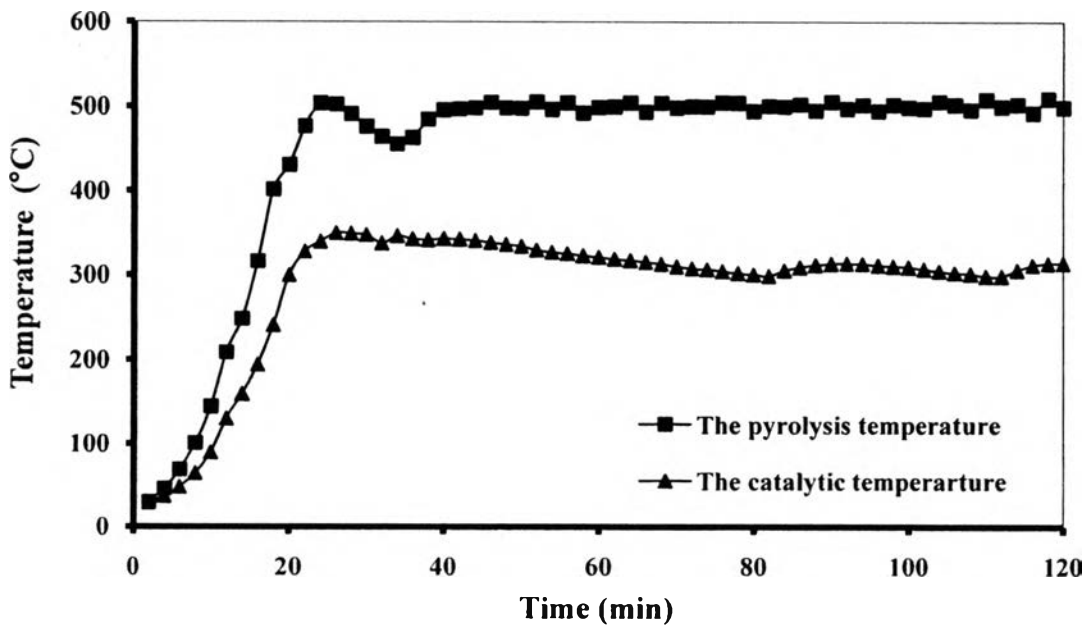

Figure A11 Operating temperature vs time on stream of Y ---> KL at $Ø_{KL}$ = 0.5.

Table A12 Pyrolysis conditions: catalytic pyrolysis using Y and KL (Y ---> KL at $Ø_{KL}$ = 0.75)

Tire = 30 g, KL = 5.625, Y = 1.875, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.8	29.3	32	360.1	507.4	62	316.4	500.4	92	301.0	501.8
4	40.4	43.1	34	362.0	501.3	64	307.5	496.9	94	298.5	495.1
6	53.2	63.1	36	362.2	499.1	66	304.4	501.0	96	304.4	509.1
8	72.8	92.8	38	359.8	494.3	68	301.7	499.3	98	310.2	496.2
10	99.8	132.0	40	357.5	501.7	70	299.0	502.4	100	312.1	502.5
12	137.5	184.9	42	353.7	491.3	72	300.6	506.3	102	311.1	495.5
14	172.8	231.8	44	349.3	503.6	74	308.1	498.6	104	309.3	502.1
16	216.7	293.6	46	344.7	499.5	76	311.9	499.4	106	307.6	499.8
18	264.7	379.9	48	339.2	492.2	78	312.9	504.6	108	305.0	495.1
20	335.0	439.6	50	335.0	506.3	80	312.3	492.0	110	301.8	504.3
22	352.9	491.8	52	330.1	501.2	82	311.2	503.6	112	299.1	495.2
24	350.1	508.6	54	326.1	493.5	84	310.0	497.0	114	296.0	501.2
26	353.5	501.8	56	322.3	503.9	86	307.4	502.8	116	308.0	504.5
28	356.3	505.4	58	318.8	495.8	88	304.9	506.7	118	311.3	501.0
30	359.2	500.7	60	316.1	506.8	90	303.2	496.5	120	311.3	499.8

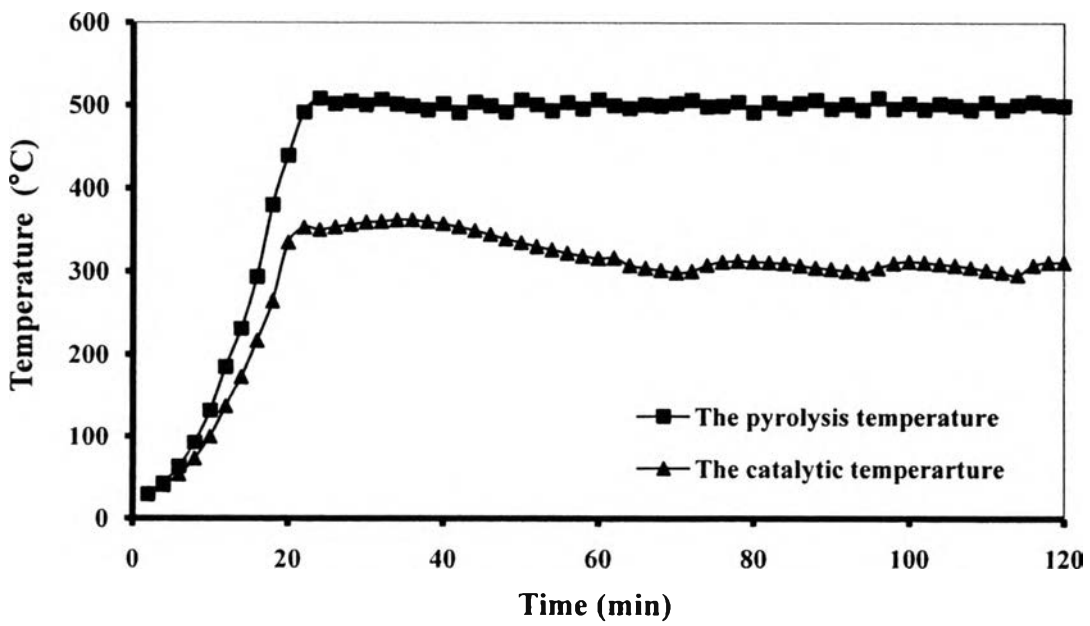

Figure A12 Operating temperature vs time on stream of Y ---> KL at $Ø_{KL}$ = 0.75.

Table A13 Pyrolysis conditions: catalytic pyrolysis using Y and KL (KL ---> Y at $Ø_{KL}$ = 0.25)

Tire = 30 g, KL = 1.875, Y = 5.625, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	28.1	27.9	32	344.0	478.0	62	313.3	493.0	92	307.3	503.1
4	35.6	41.0	34	341.2	504.3	64	314.9	505.4	94	303.2	490.8
6	52.9	70.9	36	337.6	497.9	66	314.0	497.0	96	297.5	497.8
8	66.5	96.7	38	334.2	501.5	68	312.9	504.4	98	299.4	498.3
10	90.2	140.3	40	330.7	486.0	70	310.0	492.1	100	310.3	501.2
12	125.5	195.2	42	324.5	498.7	72	306.7	501.0	102	312.1	502.9
14	160.1	247.5	44	320.9	499.0	74	302.9	506.5	104	310.4	495.0
16	215.8	328.7	46	317.7	503.1	76	297.4	492.5	106	306.6	508.9
18	259.3	393.4	48	312.3	490.8	78	300.4	502.3	108	303.3	496.3
20	326.3	442.2	50	308.7	502.3	80	301.2	509.6	110	299.9	503.1
22	347.4	484.6	52	306.5	501.0	82	314.8	495.4	112	295.8	498.6
24	348.1	509.7	54	302.7	504.2	84	316.4	506.6	114	297.0	506.9
26	343.4	501.3	56	298.4	492.8	86	316.0	494.6	116	307.7	505.1
28	347.0	500.9	58	302.4	505.1	88	314.3	505.4	118	316.5	507.7
30	345.9	480.2	60	307.0	502.2	90	311.5	498.0	120	320.5	494.5

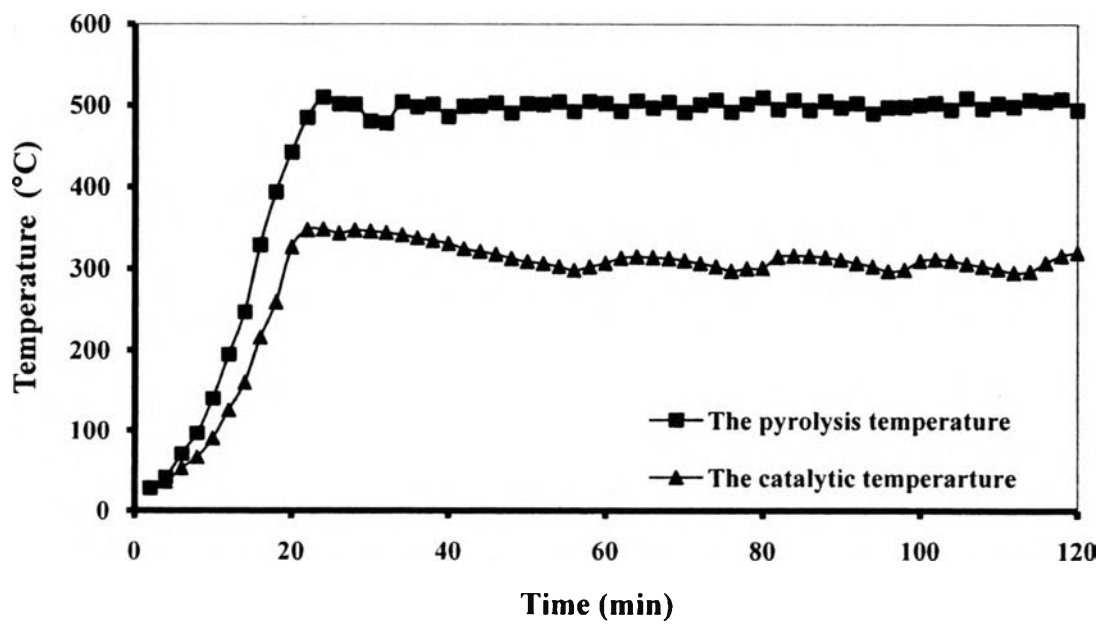

Figure A13 Operating temperature vs time on stream of KL ---> Y at $Ø_{KL}$ = 0.25.

Table A14 Pyrolysis conditions: catalytic pyrolysis using Y and KL (KL ---> Y at $Ø_{KL}$ = 0.5)

Tire = 30 g, KL = 3.75, Y = 3.75, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	30.3	34.5	32	352.3	505.9	62	312.8	507.0	92	303.3	505.9
4	40.8	55.8	34	351.4	492.4	64	310.5	496.1	94	301.0	498.1
6	50.1	89.0	36	349.6	479.2	66	308.2	501.9	96	298.9	505.5
8	80.3	138.4	38	347.0	485.0	68	306.1	493.4	98	302.7	494.1
10	100.0	176.6	40	344.6	505.6	70	303.8	509.1	100	308.0	507.3
12	158.5	273.9	42	341.7	503.4	72	301.5	497.3	102	309.4	501.0
14	193.2	324.4	44	338.9	490.2	74	298.7	508.5	104	308.9	503.5
16	229.3	386.6	46	336.1	500.9	76	300.9	499.9	106	307.9	495.6
18	303.7	434.6	48	333.4	500.1	78	307.7	505.0	108	306.3	507.1
20	318.1	474.0	50	330.0	504.1	80	310.2	496.5	110	302.3	496.3
22	342.4	509.1	52	326.4	495.5	82	311.1	498.0	112	298.0	509.2
24	347.0	500.2	54	324.0	504.6	84	310.2	504.5	114	305.0	499.9
26	350.3	505.8	56	321.3	502.1	86	308.5	497.3	116	313.1	505.1
28	352.9	495.8	58	319.0	501.0	88	307.3	501.4	118	315.9	498.7
30	352.9	500.6	60	315.7	491.8	90	304.9	493.6	120	316.7	508.5

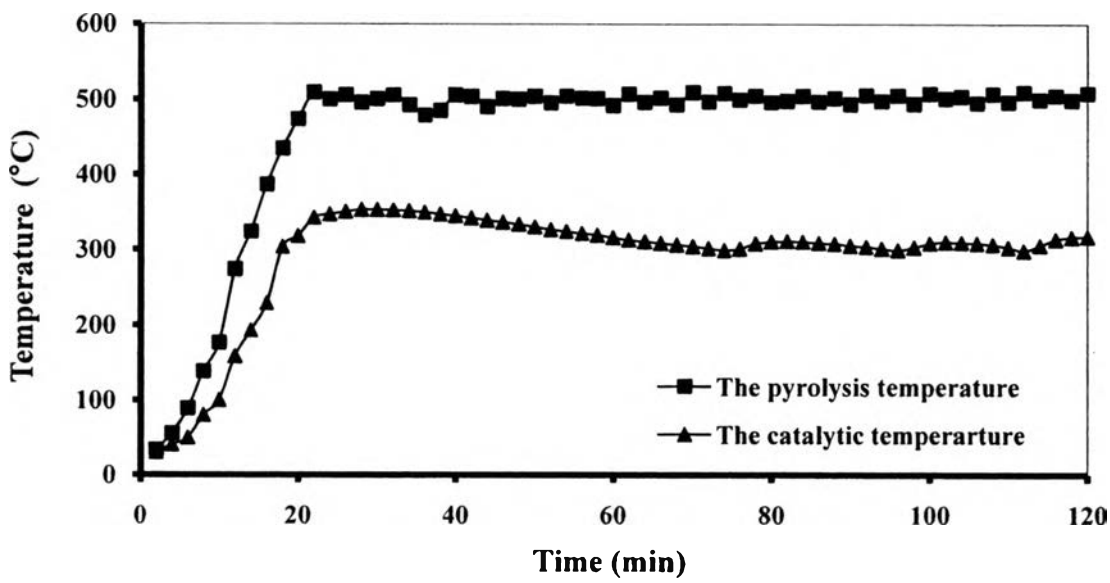

Figure A14 Operating temperature vs time on stream of KL ---> Y at $Ø_{KL}$ = 0.5.

Table A15 Pyrolysis conditions: catalytic pyrolysis using Y and KL (KL ---> Y at $Ø_{KL}$ = 0.75)

Tire = 30 g, KL = 5.625, Y = 1.875, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.6	28.5	32	354.7	502.9	62	307.8	497.4	92	308.3	505.9
4	36.6	39.3	34	355.1	499.8	64	303.7	504.3	94	309.1	499.2
6	49.0	59.1	36	353.8	504.2	66	296.5	500.7	96	308.6	503.9
8	69.5	91.0	38	350.6	495.7	68	298.3	505.7	98	307.5	499.4
10	90.0	127.3	40	346.2	476.6	70	311.7	497.6	100	305.5	506.3
12	121.1	173.9	42	341.9	488.4	72	314.7	505.6	102	303.2	498.2
14	157.9	226.7	44	339.2	506.3	74	316.3	492.7	104	299.3	505.5
16	214.9	316.9	46	336.0	501.8	76	314.9	504.7	106	295.4	498.5
18	252.2	368.3	48	332.6	500.1	78	313.3	501.1	108	299.8	507.3
20	301.5	437.6	50	328.3	500.9	80	309.5	501.3	110	305.6	507.1
22	338.4	472.9	52	323.2	493.1	82	308.9	497.0	112	305.6	505.3
24	348.1	505.3	54	320.6	505.0	84	305.3	504.9	114	317.0	498.7
26	350.6	496.9	56	316.7	498.3	86	301.1	497.1	116	316.7	505.9
28	353.5	500.7	58	311.8	502.9	88	298.2	503.2	118	315.7	497.4
30	353.5	500.2	60	309.6	498.2	90	304.6	494.4	120	312.4	504.3

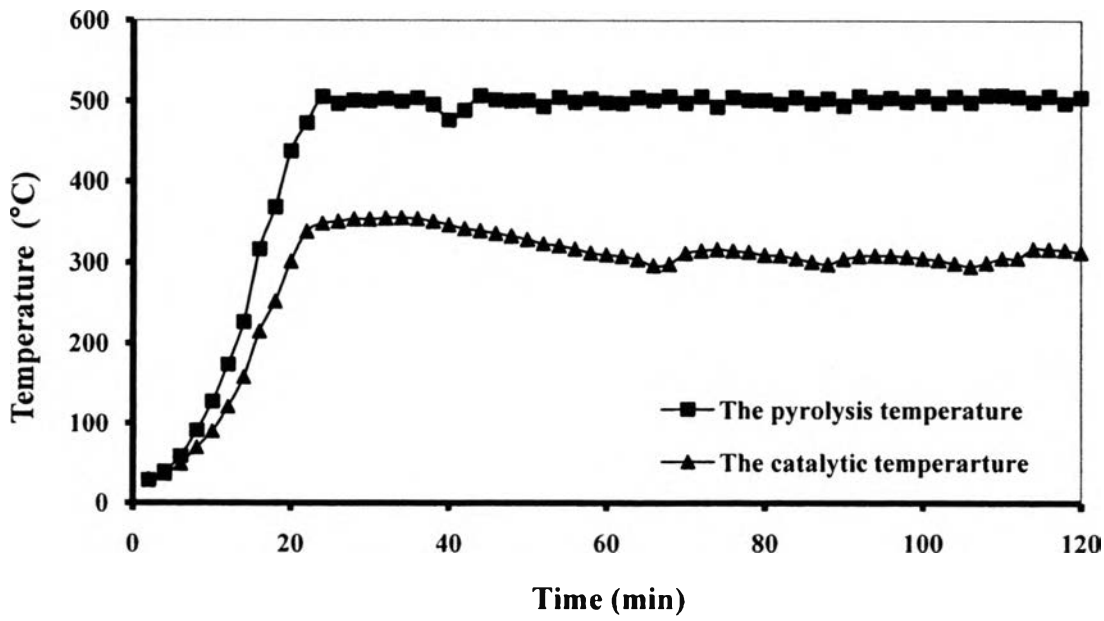

Figure A15 Operating temperature vs time on stream of KL ---> Y at $Ø_{KL}$ = 0.75.

Table A16 Pyrolysis conditions: catalytic pyrolysis using Pt/KL

Tire = 30 g, Pt/KL = 7.5 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.0	31.5	32	347.4	492.6	62	305.6	507.8	92	300.6	501.7
4	43.8	67.4	34	344.5	478.2	64	305.2	499.0	94	300.4	499.7
6	58.2	95.1	36	343.3	473.0	66	303.9	507.2	96	298.4	503.5
8	84.5	142.2	38	338.7	455.2	68	303.6	498.4	98	300.7	495.7
10	133.8	216.6	40	333.5	464.8	70	303.3	501.7	100	308.8	506.9
12	155.6	251.3	42	330.8	488.6	72	303.3	505.0	102	310.6	500.9
14	211.3	330.0	44	326.1	506.6	74	303.2	499.6	104	310.6	507.2
16	242.6	377.1	46	323.7	498.3	76	303.7	495.8	106	308.3	494.2
18	295.6	447.1	48	319.2	505.6	78	304.0	507.4	108	309.4	495.8
20	328.7	485.0	50	313.9	496.4	80	303.5	508.1	110	308.7	507
22	334.5	516.5	52	310.4	500.5	82	303.7	497.2	112	308.4	499.4
24	343.4	498.3	54	306.1	505.5	84	303.2	503.6	114	307.9	500.9
26	342.2	513.3	56	302.2	502.2	86	303.1	493.3	116	306.2	508.1
28	347.7	510.0	58	299.9	502.5	88	302.9	498.2	118	306.3	495.4
30	346.6	503.6	60	304.4	492.3	90	302.4	508.9	120	305.6	494.1

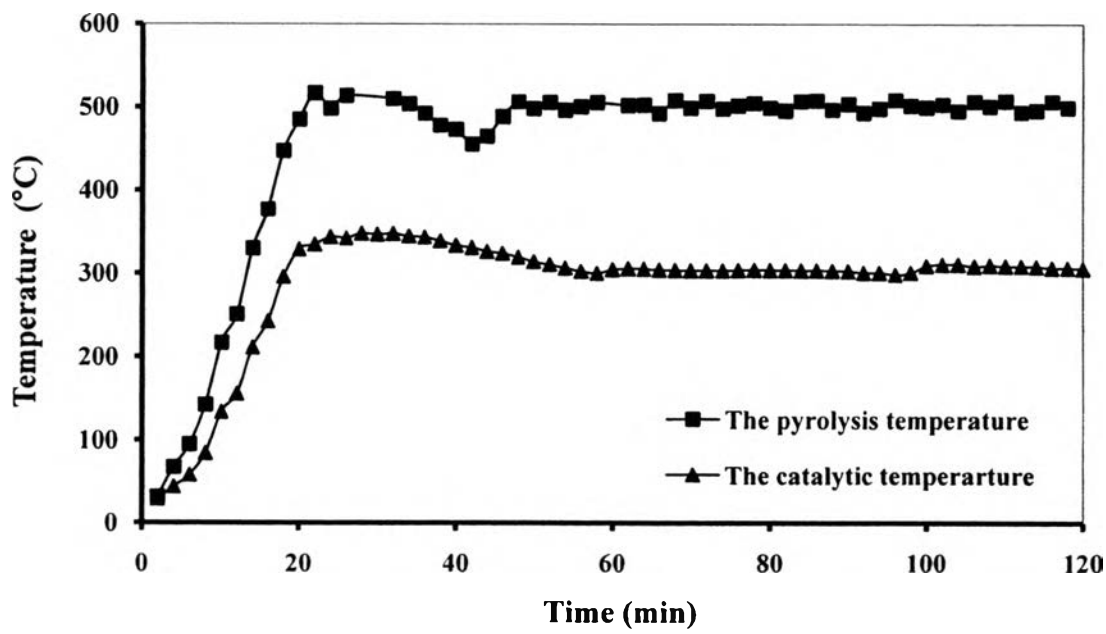

Figure A16 Operating temperature vs time on stream of Pt/KL zeolite.

Table A17 Pyrolysis conditions: catalytic pyrolysis using Pt/Y

Tire = 30 g, Pt/Y = 7.5 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.8	29.4	32	344.3	499.1	62	316.7	499.7	92	305.4	500.9
4	39.9	44.7	34	342.3	503.0	64	319.6	504.5	94	302.0	497.2
6	62.2	78.3	36	338.8	496.3	66	319.3	492.5	96	299.3	505.1
8	81.2	107.1	38	336.5	497.1	68	317.8	504.5	98	297.2	496.9
10	106.6	148.9	40	332.4	505.8	70	312.6	503.5	100	305.9	502.5
12	139.9	201.7	42	328.3	499.3	72	310.5	496.4	102	311.2	501.7
14	180.0	260.8	44	323.8	497.2	74	306.8	507.1	104	312.0	499.4
16	227.6	329.6	46	319.3	505.0	76	303.6	501.8	106	310.0	502.0
18	290.3	411.4	48	314.5	497.1	78	297.1	506.1	108	307.2	494.4
20	328.7	440.4	50	310.1	502.6	80	295.0	492.2	110	303.9	506.2
22	351.9	489.0	52	305.7	499.8	82	302.5	506.3	112	299.1	501.3
24	353.4	505.8	54	300.9	501.3	84	312.5	505.0	114	296.6	503.2
26	353.6	503.7	56	299.6	502.0	86	313.3	504.2	116	295.2	492.4
28	344.3	493.6	58	306.6	496.6	88	312.4	492.7	118	306.6	501.9
30	344.3	502.3	60	310.5	495.8	90	309.6	506.5	120	313.0	501.1

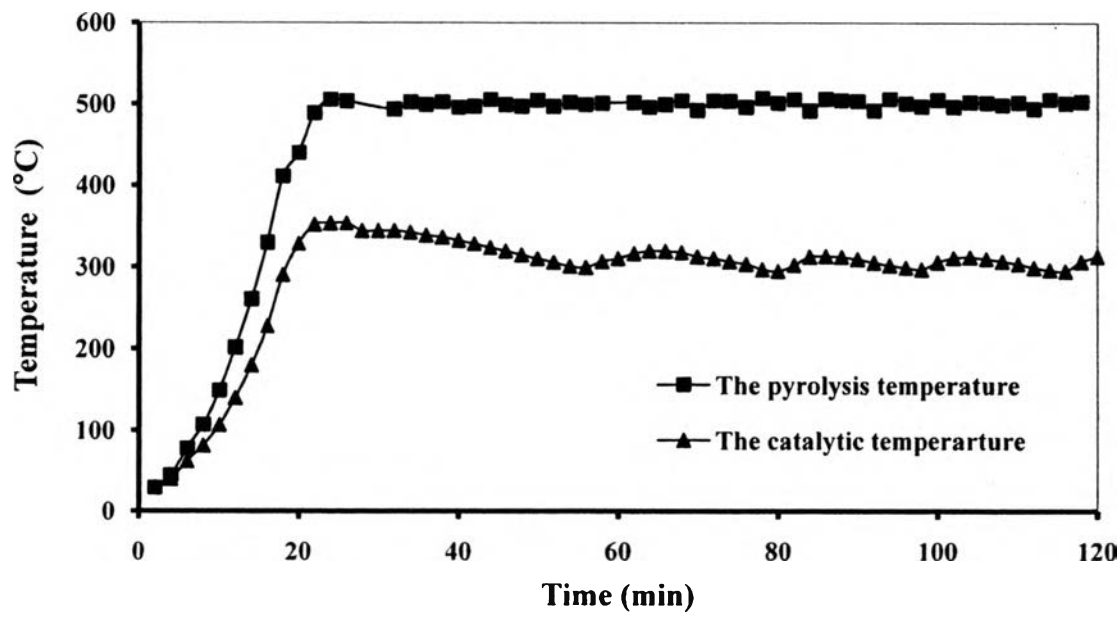

Figure A17 Operating temperature vs time on stream of Pt/Y.

Table A18 Pyrolysis conditions: catalytic pyrolysis using Pt/Y and Pt/KL (Pt/Y + Pt/KL at $Ø_{Pt/KL}$ = 0.25)

Tire = 30 g, Pt/KL = 1.875 g, Pt/Y = 5.625 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	28.6	25.9	32	335.7	499.0	62	306.5	504.9	92	314.4	491.5
4	52.3	57.8	34	333.7	504.2	64	301.4	503.0	94	311.1	497.7
6	54.3	60.8	36	330.5	491.5	66	298.2	500.2	96	307.7	496.6
8	77.2	94.3	38	324.5	494.2	68	295.6	490.1	98	303.3	502.6
10	108.2	140.3	40	317.3	496.3	70	310.3	505.6	100	297.3	498.5
12	141.3	189.3	42	314.6	506.3	72	314.8	499.4	102	297.6	506.3
14	190.2	265.8	44	309.5	493.5	74	315.4	505.0	104	306.0	504.0
16	227.8	323.8	46	305.6	495.1	76	315.5	491.0	106	313.3	495.4
18	273.0	402.7	48	301.2	500.2	78	312.1	502.5	108	312.4	498.7
20	327.7	447.6	50	296.4	508.4	80	307.6	503.7	110	310.0	500.0
22	335.6	492.2	52	305.6	503.0	82	303.9	497.3	112	305.6	496.2
24	323.0	505.2	54	315.8	496.1	84	300.0	497.6	114	301.7	504.4
26	336.5	501.2	56	318.2	502.2	86	303.6	509.1	116	297.7	492.7
28	335.8	490.3	58	316.6	503.4	88	312.2	499.6	118	305.6	511.2
30	333.9	505.6	60	313.2	493.1	90	313.3	505.6	120	310.6	506.4

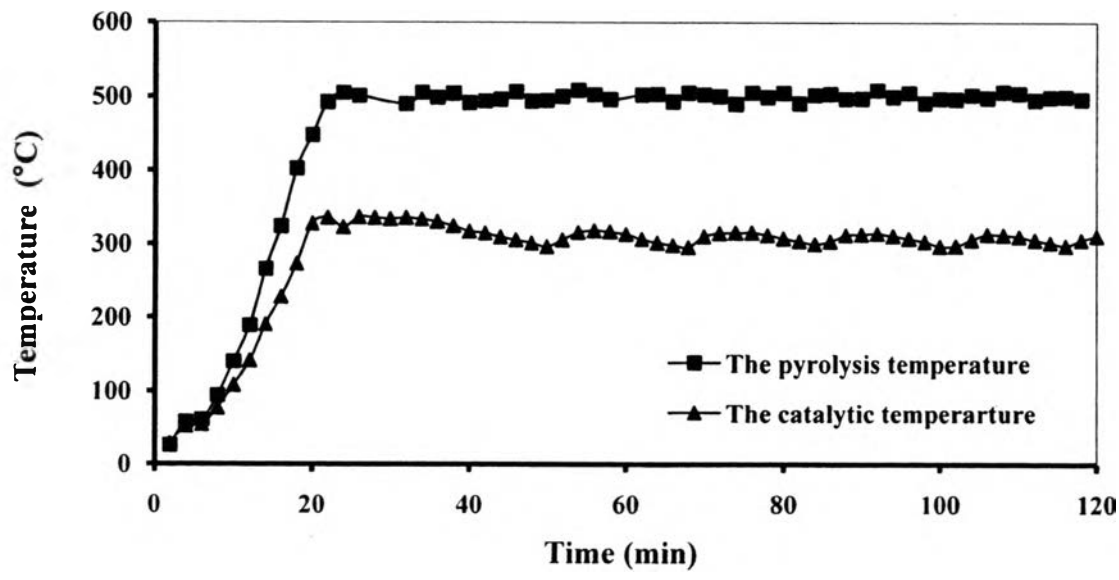

Figure A18 Operating temperature vs time on stream of Pt/Y + Pt/KL at $Ø_{Pt/KL}$ = 0.25.

Table A19 Pyrolysis conditions: catalytic pyrolysis using Pt/Y and Pt/KL (Pt/Y + Pt/KL at $Ø_{Pt/KL}$ = 0.5)

Tire = 30 g, Pt/KL = 3.75 g, Pt/Y = 3.75 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	82.8	105.3	32	318.1	498.8	62	309.5	499.4	92	302.7	505.6
4	105.3	134.3	34	315.4	505.0	64	310.8	493.9	94	305.1	503.2
6	129.8	169.3	36	310.6	501.6	66	309.0	502.2	96	303.0	494.6
8	165.7	222.8	38	306.2	493.4	68	306.5	497.3	98	299.2	505.1
10	199.2	272.6	40	300.5	499.6	70	302.7	502.8	100	301.4	502.0
12	273.7	395.8	42	303.7	503.9	72	298.6	493.0	102	308.4	505.0
14	318.0	433.6	44	306.9	499.7	74	300.1	509.6	104	310.1	498.6
16	330.8	478.6	46	310.9	505.4	76	307.7	500.8	106	311.6	504.6
18	335.2	497.9	48	311.4	499.4	78	308.1	501.5	108	312.8	499.0
20	337.7	505.4	50	308.5	500.9	80	308.6	505.4	110	310.0	499.7
22	336.0	503.6	52	305.9	497.0	82	309.2	495.5	112	307.0	494.9
24	331.1	493.1	54	302.2	503.1	84	308.0	499.3	114	303.1	502.7
26	329.4	497.4	56	298.2	491.7	86	305.4	500.5	116	298.0	503.7
28	326.6	500.6	58	299.0	508.8	88	301.3	500.7	118	298.7	500.3
30	323.2	505.4	60	308.7	505.0	90	296.3	490.0	120	308.9	497.7

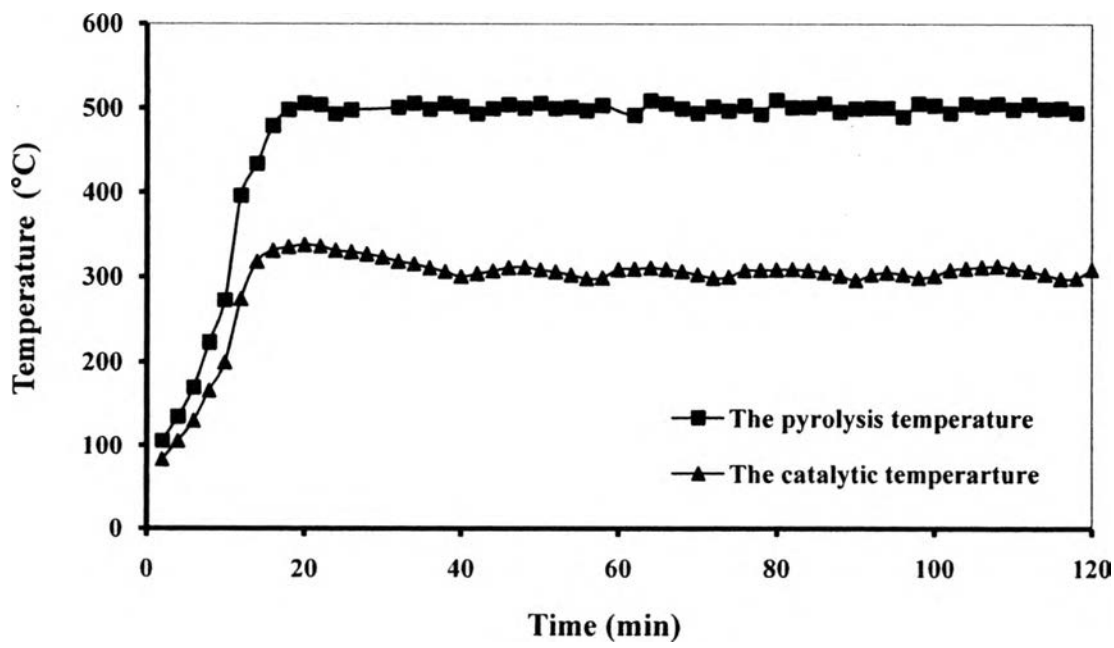

Figure A19 Operating temperature vs time on stream of Pt/Y + Pt/KL at $Ø_{Pt/KL}$ = 0.5.

Table A20 Pyrolysis conditions: catalytic pyrolysis using Pt/Y and Pt/KL (Pt/Y + Pt/KL at $Ø_{Pt/KL}$ = 0.75)

Tire = 30 g, Pt/KL = 5.625 g, Pt/Y = 1.875 g, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.3	32.4	32	330.6	491.3	62	320.3	493.2	92	309.3	507.5
4	32.2	60.5	34	375.7	494.5	64	310.9	504.2	94	308.0	490.3
6	36.3	88.3	36	362.4	506.0	66	310.2	500.5	96	304.1	504.7
8	41.9	123.6	38	360.0	496.7	68	303.1	505.4	98	301.2	498.9
10	56.0	170.8	40	351.1	495.4	70	299.8	495.3	100	298.6	501.5
12	73.9	229.8	42	349.2	501.8	72	297.7	494.5	102	300.4	495.5
14	98.6	299.0	44	348.7	505.4	74	308.3	509.3	104	307.7	507.0
16	117.8	348.7	46	349.0	497.4	76	310.6	497.5	106	308.3	500.7
18	154.0	435.2	48	345.3	500.4	78	310.8	503.5	108	309.1	508.5
20	180.4	453.5	50	340.2	497.6	80	307.5	502.6	110	310.3	503.2
22	204.9	510.5	52	335.6	502.4	82	305.1	500.5	112	311.4	494.2
24	252.9	503.3	54	331.2	499.6	84	301.7	506.5	114	311.7	506.6
26	271.3	501.4	56	326.4	496.3	86	295.4	492.8	116	312.4	497.9
28	349.1	505.9	58	322.4	506.8	88	298.1	505.3	118	311.5	504.2
30	330.1	501.4	60	321.4	503.6	90	307.9	497.2	120	309.6	492.5

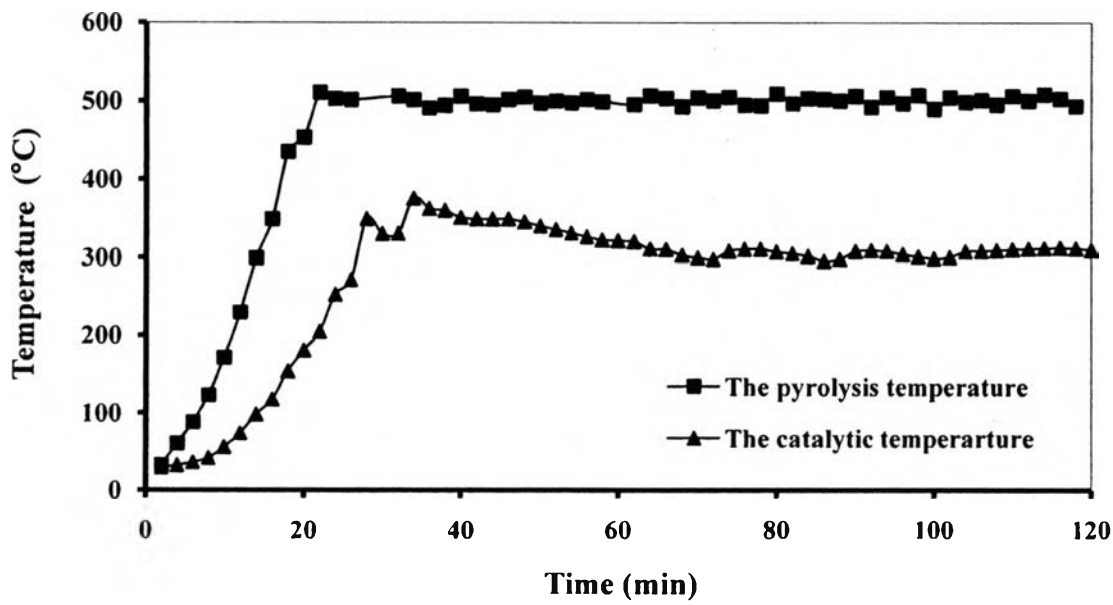

Figure A20 Operating temperature vs time on stream of Pt/Y + Pt/KL at $Ø_{Pt/KL}$ = 0.75.

Table A21 Pyrolysis conditions: catalytic pyrolysis using Pt/Y and Pt/KL (Pt/Y ---> Pt/KL at $Ø_{Pt/KL}$ = 0.25)

Tire = 30 g, Pt/KL = 1.875, Pt/Y = 5.625, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	27.8	27.3	32	334.5	502.0	62	325.5	499.8	92	303.3	503.2
4	35.6	42.2	34	344.4	499.3	64	322.2	499.7	94	300.5	497.8
6	50.8	70.8	36	352.2	494.8	66	317.0	499.2	96	298.6	506.7
8	78.6	119.8	38	354.4	504.2	68	314.2	499.1	98	306.8	497.3
10	99.3	149.9	40	350.8	501.9	70	310.2	499.9	100	309.4	505.6
12	137.2	227.7	42	353.9	504.6	72	305.2	499.2	102	311.5	500.5
14	159.2	263.8	44	353.3	498.6	74	300.7	495.3	104	311.5	504.2
16	195.3	327.4	46	352.4	506.0	76	299.0	505.4	106	310.0	499.2
18	241.1	416.0	48	347.5	498.7	78	299.5	498.9	108	307.4	502.5
20	307.3	457.2	50	347.1	505.8	80	307.3	502.1	110	304.4	504.5
22	330.1	492.3	52	346.3	496.4	82	312.2	495.8	112	301.2	499.9
24	261.2	513.2	54	342.5	503.6	84	313.3	503.1	114	298.4	505.0
26	277.8	507.9	56	334.4	500.1	86	311.5	501.9	116	298.3	495.7
28	308.1	502.3	58	334.3	501.9	88	309.5	502.1	118	308.3	507.8
30	324.1	500.2	60	329.1	500.4	90	304.5	505.6	120	311.5	503.4

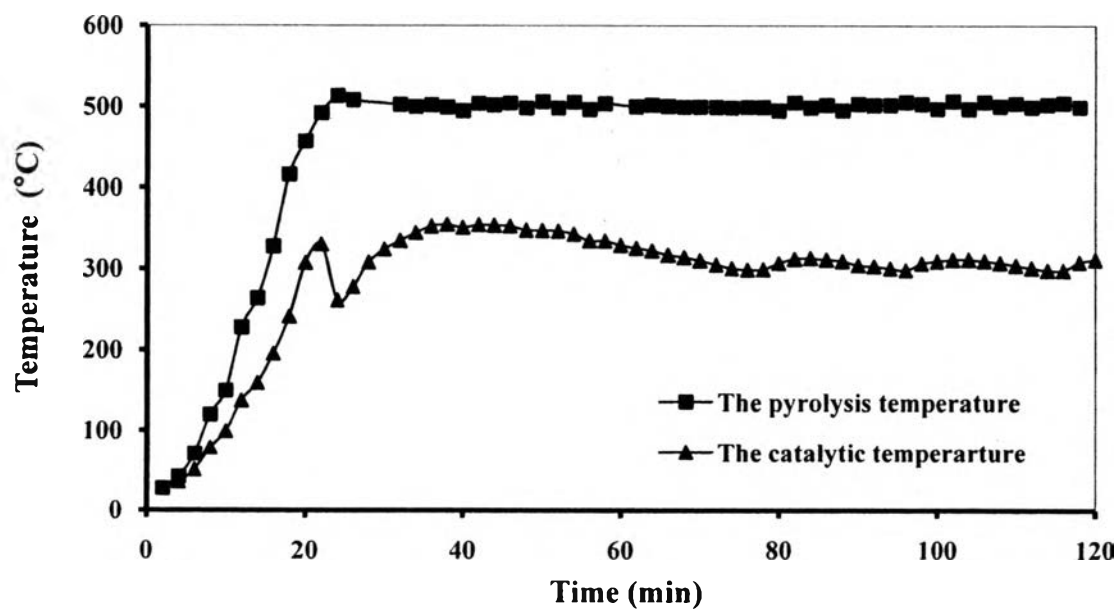

Figure A21 Operating temperature vs time on stream of Pt/Y ---> Pt/KL at $Ø_{Pt/KL}$ = 0.25.

Table A22 Pyrolysis conditions: catalytic pyrolysis using Pt/Y and Pt/KL (Pt/Y ---> Pt/KL at $Ø_{Pt/KL}$ = 0.5)

Tire = 30 g, Pt/KL = 3.75, Pt/Y = 3.75, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	35.7	37.4	32	341.2	505.2	62	307.9	497.0	92	309.5	501.4
4	48.0	56.3	34	336.6	498.1	64	304.8	502.1	94	311.8	500.2
6	68.9	88.8	36	330.2	494.4	66	301.5	494.7	96	312.1	497.7
8	97.1	131.2	38	323.4	504.3	68	297.9	502.6	98	309.3	508.5
10	137.8	198.7	40	320.4	501.7	70	300.9	498.8	100	305.5	497.2
12	165.1	242.3	42	318.7	500.7	72	308.7	508.1	102	302.7	504.9
14	201.9	301.0	44	312.5	496.1	74	312.6	501.1	104	299.4	494.0
16	248.2	371.8	46	308.6	494.6	76	315.6	499.8	106	297.0	493.7
18	305.4	437.3	48	302.7	502.0	78	313.7	492.3	108	308.4	507.8
20	347.2	474.1	50	299.4	500.1	80	311.3	499.3	110	312.5	500.0
22	347.1	506.0	52	298.8	507.6	82	307.6	496.2	112	315.4	495.9
24	345.3	498.7	54	308.7	501.8	84	303.7	502.1	114	313.3	501.4
26	347.0	503.7	56	311.5	490.3	86	299.4	496.1	116	312.8	497.2
28	348.2	491.8	58	311.4	504.9	88	297.3	509.8	118	309.1	508.6
30	344.5	495.0	60	310.8	495.5	90	303.4	507.8	120	305.8	494.7

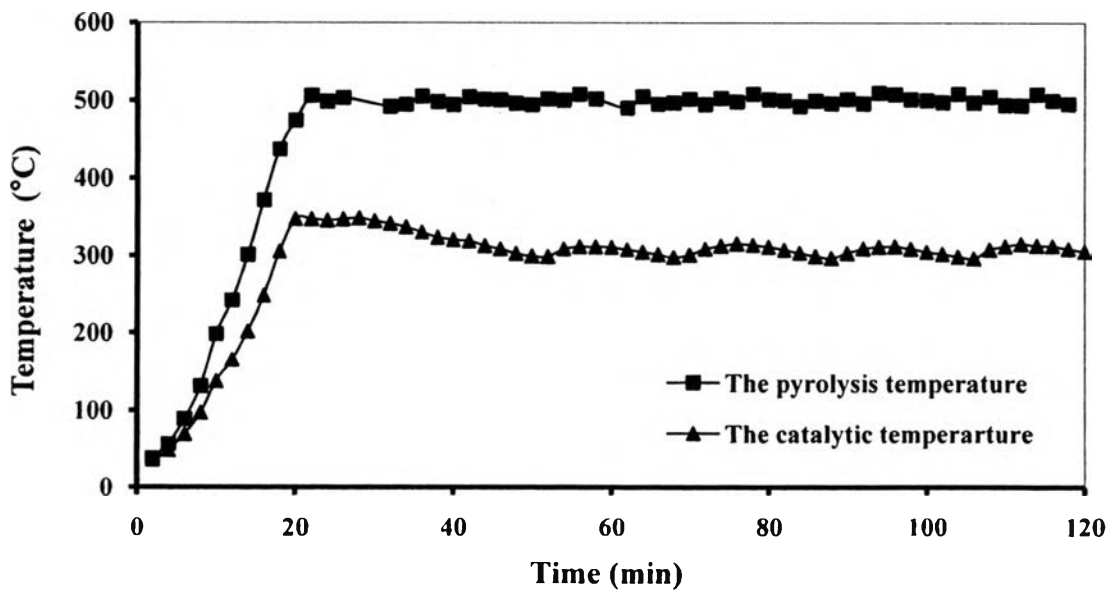

Figure A22 Operating temperature vs time on stream of Pt/Y ---> Pt/KL at $Ø_{Pt/KL}$ = 0.5.

Table A23 Pyrolysis conditions: catalytic pyrolysis using Pt/Y and Pt/KL (Pt/Y ---> Pt/KL at $Ø_{Pt/KL}$ = 0.75)

Tire = 30 g, Pt/KL = 5.625, Pt/Y = 1.875, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	29.6	38.5	32	344.6	492.0	62	316.1	497.2	92	308.2	498.3
4	46.0	72.6	34	342.2	503.9	64	317.2	492.9	94	304.2	506.4
6	64.0	105.8	36	336.4	500.0	66	314.7	506.0	96	300.0	499.3
8	91.8	150.5	38	331.5	499.1	68	311.9	496.9	98	296.5	506.2
10	119.2	198.7	40	327.6	501.4	70	309.4	504.8	100	309.8	500.7
12	146.3	251.7	42	324.3	502.2	72	305.2	495.1	102	313.9	503.4
14	179.6	316.8	44	320.5	501.3	74	301.1	508.6	104	315.9	493.9
16	240.0	430.5	46	316.1	506.2	76	295.5	506.0	106	314.1	506.3
18	279.4	454.5	48	310.0	495.9	78	306.7	499.1	108	312.5	500.0
20	337.1	490.3	50	306.9	505.8	80	311.9	496.3	110	308.5	505.3
22	340.5	504.4	52	301.7	500.4	82	315.4	508.2	112	299.2	506.5
24	342.1	502.3	54	299.2	505.7	84	318.7	497.7	114	296.1	503.4
26	344.7	499.6	56	302.5	497.7	86	317.0	502.7	116	299.1	499.2
28	343.1	497.7	58	310.2	506.3	88	314.6	493.4	118	307.0	507.1
30	345.5	478.3	60	313.5	501.4	90	312.0	502.1	120	312.7	500.9

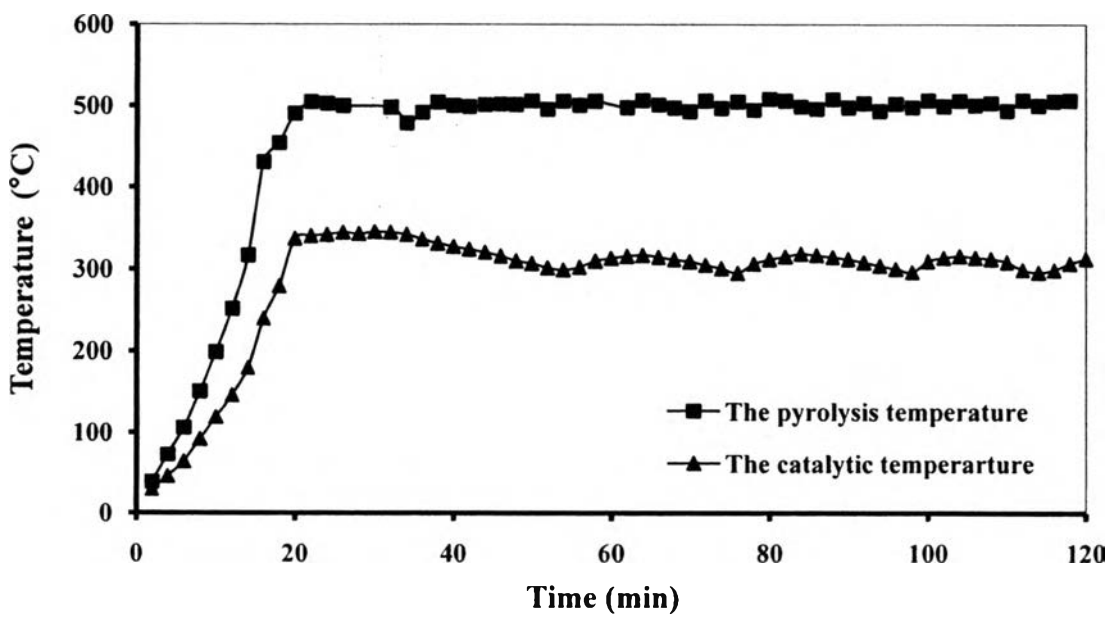

Figure A23 Operating temperature vs time on stream of Pt/Y ---> Pt/KL at $Ø_{Pt/KL}$ = 0.75.

Table A24 Pyrolysis conditions: catalytic pyrolysis using Pt/Y and Pt/KL (Pt/KL ---> Pt/Y at $Ø_{Pt/KL}$ = 0.25)

Tire = 30 g, Pt/KL = 1.875, Pt/Y = 5.625, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	31.3	33.1	32	342.5	503.8	62	314.8	499.1	92	307.9	507.1
4	43.2	54.4	34	339.3	502.2	64	311.6	505.9	94	306.4	496.7
6	61.5	85.9	36	338.6	505.5	66	308.5	497.3	96	304.1	505.1
8	88.1	129.0	38	337.3	488.5	68	305.9	502.4	98	302.2	499.7
10	117.7	175.0	40	335.1	505.8	70	301.4	504.8	100	300.0	505.9
12	154.7	235.4	42	334.1	506.5	72	300.9	504.3	102	296.5	495.5
14	198.7	309.5	44	332.5	497.4	74	298.4	500.8	104	298.9	505.7
16	256.0	402.6	46	329.9	497.5	76	301.5	503.2	106	308.9	497.8
18	311.0	446.5	48	329.0	495.5	78	308.1	493.6	108	312.8	507.7
20	340.2	447.1	50	327.0	503.3	80	318.8	505.6	110	315.0	497.7
22	345.5	508.8	52	325.1	505.1	82	315.7	504.1	112	316.9	500.7
24	348.2	502.7	54	323.5	496.5	84	311.8	502.7	114	316.9	504.1
26	349.1	495.6	56	320.5	505.4	86	312.0	497.3	116	315.9	502.0
28	350.1	504.6	58	319.0	499.2	88	311.1	506.4	118	314.5	500.0
30	347.5	499.3	60	317.1	505.7	90	309.8	499.1	120	312.8	493.8

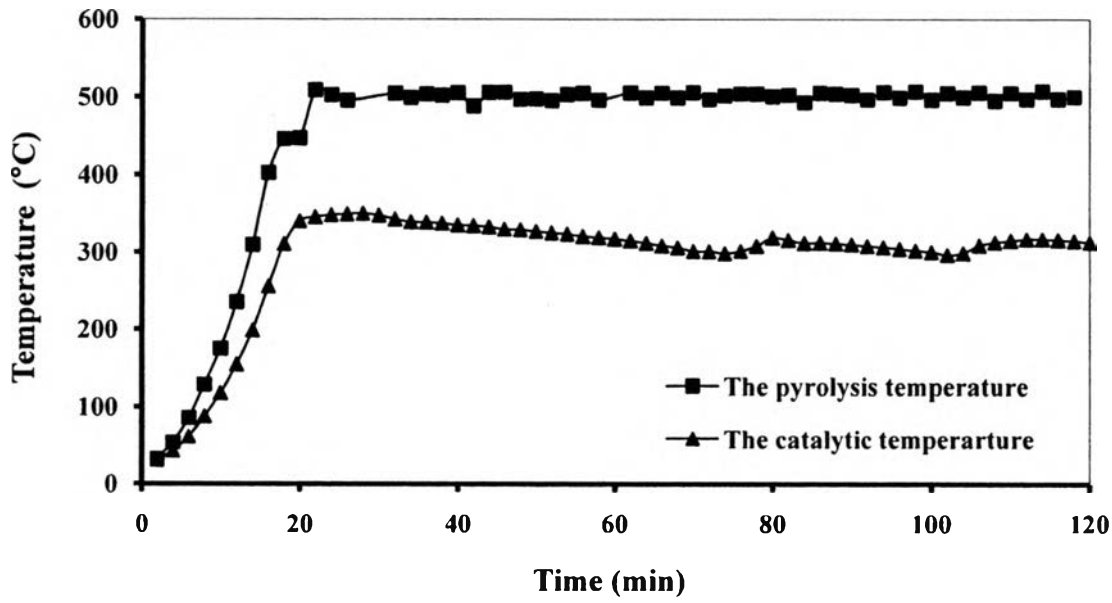

Figure A24 Operating temperature vs time on stream of Pt/KL ---> Pt/Y at $Ø_{Pt/KL}$ = 0.25.

Table A25 Pyrolysis conditions: catalytic pyrolysis using Pt/Y and Pt/KL (Pt/KL ---> Pt/Y at $Ø_{Pt/KL}$ = 0.5)

Tire = 30 g, Pt/KL = 3.75, Pt/Y = 3.75, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	28.6	29.5	32	341.4	506.9	62	313.8	502.4	92	307.3	497.0
4	36.5	45.2	34	340.1	504.7	64	312.6	497.9	94	305.6	506.8
6	49.8	70.1	36	337.7	499.3	66	310.3	501.3	96	304.3	497.2
8	70.5	120.0	38	336.6	506.5	68	309.3	508.6	98	300.2	497.5
10	105.0	169.2	40	336.5	501.9	70	305.0	504.4	100	299.8	504.9
12	128.5	207.9	42	334.0	506.8	72	301.5	496.3	102	302.8	495.1
14	179.2	285.3	44	333.4	498.6	74	297.7	504.6	104	307.8	508.3
16	203.6	333.4	46	332.0	507.3	76	302.4	497.8	106	309.8	501.9
18	248.1	413.0	48	330.2	493.2	78	311.2	505.4	108	310.9	505.7
20	323.2	463.9	50	328.2	500.6	80	312.3	494.3	110	311.4	502.7
22	340.2	493.7	52	326.1	504.5	82	314.8	498.4	112	312.6	492.3
24	345.7	507.3	54	324.8	504.6	84	314.9	506.3	114	312.7	506.5
26	344.5	502.6	56	322.8	503.0	86	314.7	504.1	116	311.6	498.9
28	345.6	490.3	58	319.8	497.0	88	312.4	497.1	118	310.2	502.2
30	343.2	503.2	60	318.6	505.4	90	309.7	504.5	120	308.8	496.8

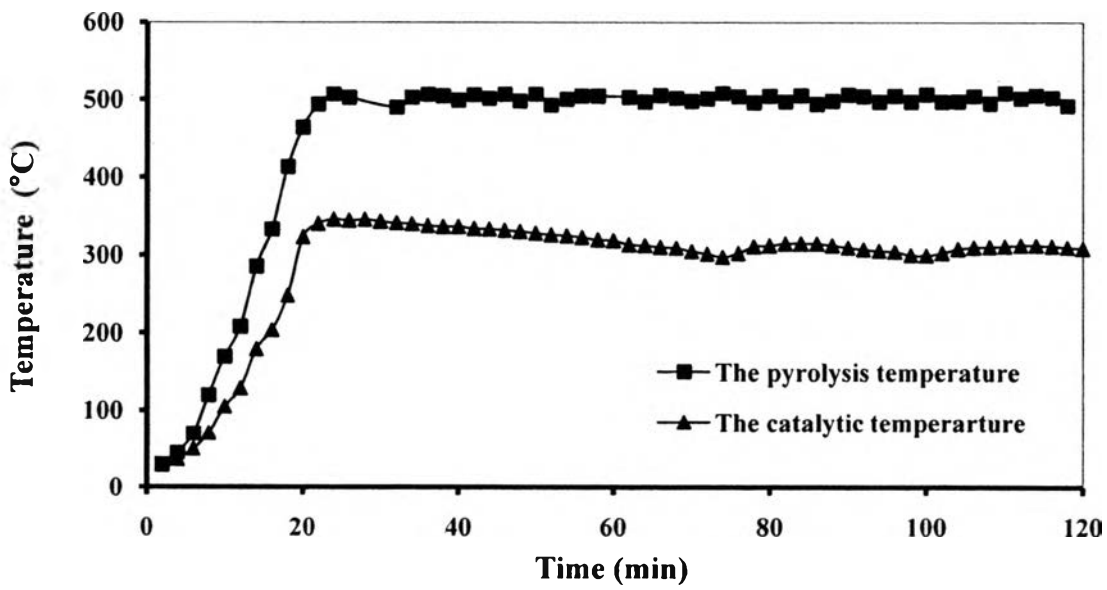

Figure A25 Operating temperature vs time on stream of Pt/KL ---> Pt/Y at $Ø_{Pt/KL}$ = 0.5.

Table A26 Pyrolysis conditions: catalytic pyrolysis using Pt/Y and Pt/KL (Pt/KL ---> Pt/Y at $Ø_{Pt/KL}$ = 0.75)

Tire = 30 g, Pt/KL = 5.625, Pt/Y = 1.875, N_2 flow = 30 ml/min

Pyrolysis Zone Temperature: set value = 500 °C

Catalyst Zone Temperature: set value = 300 °C

Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2	Time (min)	T1	T2
2	35.8	40.1	32	334.1	492.0	62	317.7	503.5	92	302.5	504.9
4	43.1	52.9	34	328.3	501.5	64	314.8	503.7	94	297.7	501.5
6	57.0	78.7	36	324.7	499.0	66	312.4	497.8	96	304.9	503.9
8	80.7	116.2	38	321.0	495.2	68	309.5	504.2	98	309.2	502.2
10	117.1	170.3	40	315.6	505.5	70	305.6	500.2	100	313.5	499.2
12	140.2	203.2	42	312.6	502.9	72	302.3	499.6	102	313.7	494.1
14	169.5	257.3	44	308.3	503.8	74	298.5	510.1	104	312.0	505.5
16	218.4	312.9	46	309.3	496.5	76	299.0	505.9	106	308.3	505.9
18	281.7	399.2	48	306.4	500.3	78	310.5	498.1	108	305.2	500.7
20	328.7	448.9	50	303.1	500.1	80	316.2	494.8	110	301.5	492.4
22	332.2	495.4	52	298.0	499.3	82	317.4	504.0	112	297.3	504.2
24	332.6	503.7	54	300.9	508.7	84	316.0	498.2	114	299.9	503.6
26	336.6	502.1	56	313.2	500.8	86	313.1	496.2	116	309.2	498.5
28	336.6	499.8	58	314.3	497.8	88	309.7	505.3	118	313.2	503.4
30	337.8	487.2	60	317.8	498.3	90	305.7	497.0	120	312.7	496.5

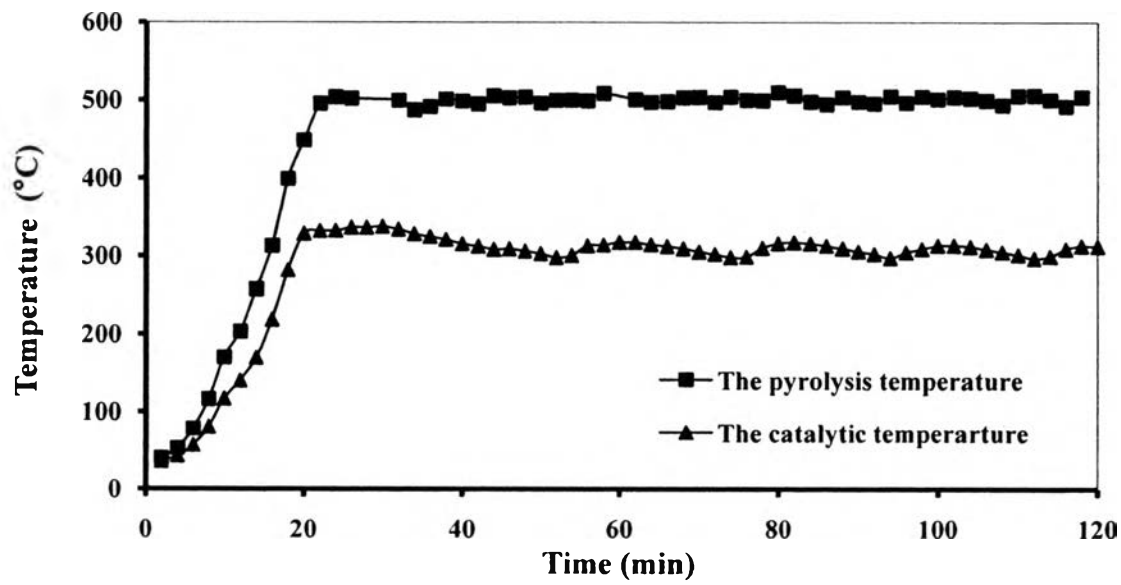

Figure A26 Operating temperature vs time on stream of Pt/KL ---> Pt/Y at $Ø_{Pt/KL}$ = 0.75.

B. Yields of Pyrolysis Products

Table B1 Effects of KL, Y and platinum-supported catalysts

	Non-Catalyst	Y	KL	Pt/Y	Pt/KL
Gas	22.47	25.25	25.19	29.01	24.63
Liquid	34.38	26.95	29.26	23.45	28.33
Solid	44.92	46.40	45.55	47.29	47.04

Table B2 Effects of physical mixtures and platinum-supported catalysts

	Y + KL			Pt/Y + Pt/KL		
	$Ø_{KL}$ = 0.25	$Ø_{KL}$ = 0.5	$Ø_{KL}$ = 0.75	$Ø_{Pt/KL}$ = 0.25	$Ø_{Pt/KL}$ = 0.5	$Ø_{Pt/KL}$ = 0.75
Gas	34.20	35.03	35.40	28.40	30.04	22.58
Liquid	20.15	19.72	19.10	27.74	26.05	32.99
Solid	45.65	44.89	45.51	43.86	43.91	44.43

Table B3 Effects of packing sequence (Y ---> KL) and platinum-supported catalysts

	Y ---> KL			Pt/Y ---> Pt/KL		
	$Ø_{KL}$ = 0.25	$Ø_{KL}$ = 0.5	$Ø_{KL}$ = 0.75	$Ø_{Pt/KL}$ = 0.25	$Ø_{Pt/KL}$ = 0.5	$Ø_{Pt/KL}$ = 0.75
Gas	29.36	32.57	32.10	24.24	27.36	29.56
Liquid	26.60	19.01	22.82	33.30	28.66	26.76
Solid	44.03	48.42	45.04	42.46	43.98	43.69

Table B4 Effects of packing sequence (KL ---> Y) and platinum-supported catalysts

	KL ---> Y			Pt/KL --->Pt/ Y		
	$Ø_{KL}$ = 0.25	$Ø_{KL}$ = 0.5	$Ø_{KL}$ = 0.75	$Ø_{Pt/KL}$ = 0.25	$Ø_{Pt/KL}$ = 0.5	$Ø_{Pt/KL}$ = 0.75
Gas	30.00	32.00	32.30	29.82	30.42	27.41
Liquid	23.64	23.18	21.19	27.29	26.53	24.68
Solid	46.36	44.82	46.51	42.89	43.05	47.92

C. Pyrolysis Gas Composition, g/100 g Tires

Table C1 Influences of various zeolites

Component	Non-Catalst	Y	KL	Pt/Y	Pt/KL
Methane	4.985	5.375	5.197	6.194	4.904
Ethylene	2.381	2.390	2.451	2.691	2.416
Ethane	3.667	4.479	4.592	4.847	4.267
Propylene	2.685	3.083	2.994	3.397	2.983
Propane	1.624	2.286	2.318	2.547	2.202
C4	4.572	5.160	5.400	6.225	5.540
C5	2.411	2.386	2.191	2.997	2.219
C6	0.126	0.062	0.031	0.077	0.069
C7	0.005	0.028	0.014	0.021	0.014
C8	0.014	0.001	0.002	0.013	0.017
Total	**22.47**	**25.25**	**25.19**	**29.01**	**24.63**

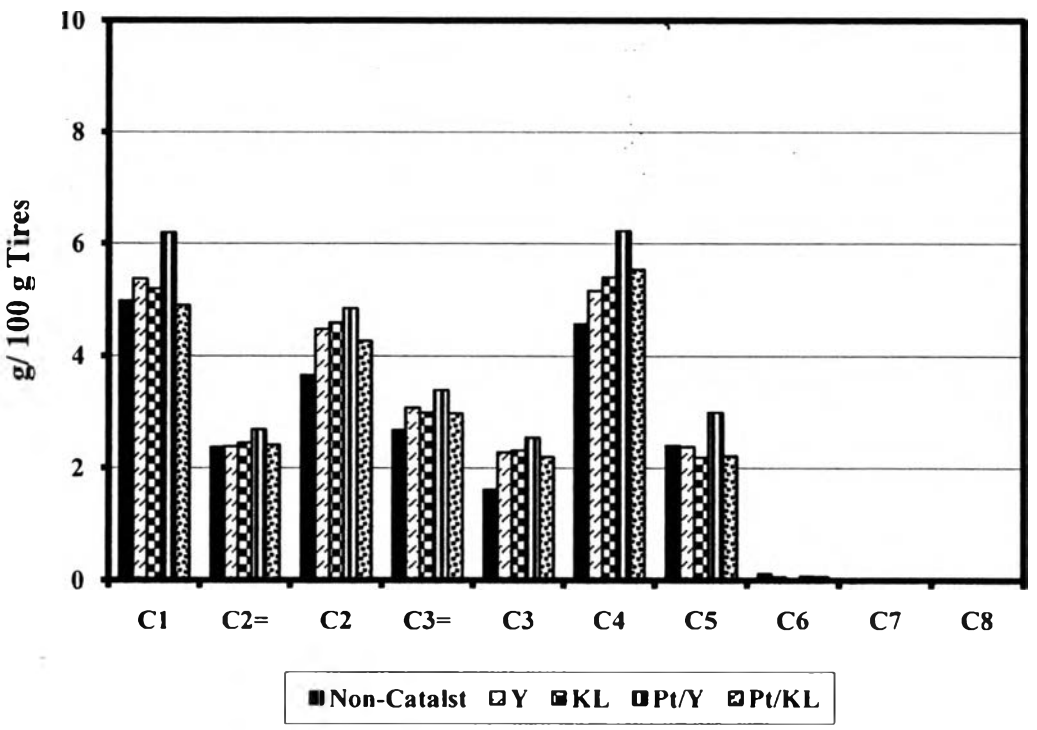

Figure C1 Pyrolytic gas composition obtained from using various zeolites.

Table C2 Influences of physical mixtures (Y + KL) and corresponding platinum-supported beds (Pt/Y + Pt/KL)

Component	Y + KL			Pt/Y + Pt/KL		
	$Ø_{KL}$ = 0.25	$Ø_{KL}$ = 0.5	$Ø_{KL}$ = 0.75	$Ø_{Pt/KL}$ = 0.25	$Ø_{Pt/KL}$ = 0.5	$Ø_{Pt/KL}$ = 0.75
Methane	6.814	6.771	8.290	6.096	6.647	4.660
Ethylene	3.463	3.169	3.534	2.618	2.713	2.151
Ethane	6.309	5.904	6.524	4.954	5.303	3.913
Propylene	4.480	3.970	4.132	3.400	3.553	2.691
Propane	3.326	3.003	3.042	2.584	2.780	2.040
C4	7.440	6.754	5.934	6.248	6.596	4.934
C5	2.228	5.412	3.898	2.350	2.279	2.114
C6	0.114	0.046	0.045	0.116	0.151	0.061
C7	0.026	0.001	0.000	0.028	0.014	0.007
C8	0.000	0.001	0.002	0.005	0.003	0.010
Total	**34.20**	**35.03**	**35.40**	**28.40**	**30.04**	**22.58**

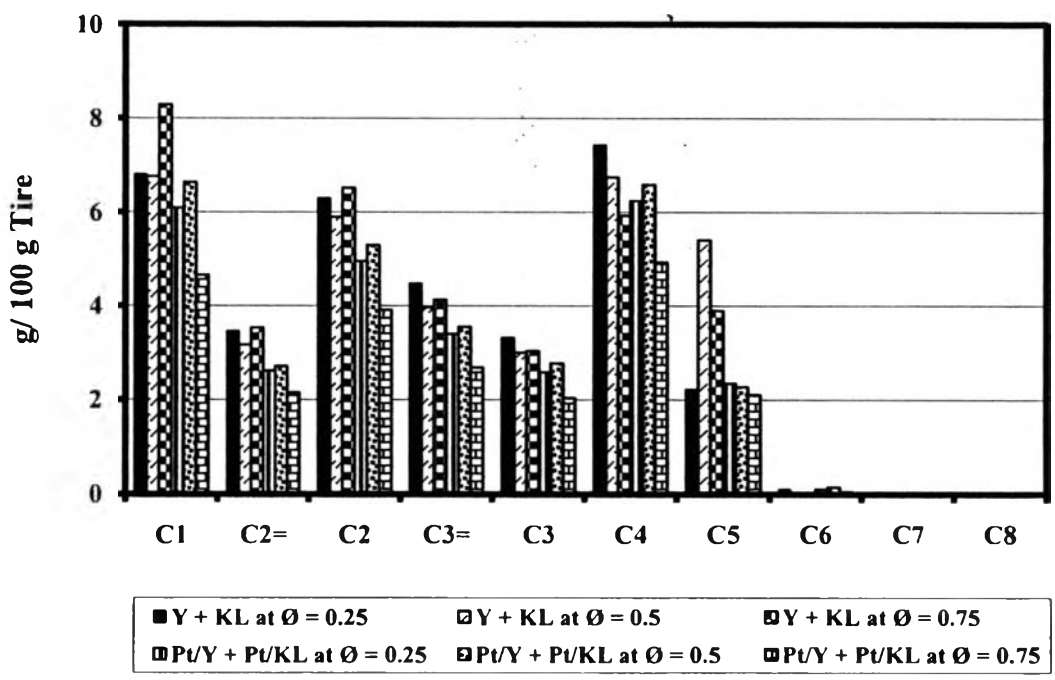

Figure C2 Pyrolytic gas composition obtained from physical mixtures (Y + KL) and corresponding platinum-supported beds at various weight fractions of KL ($Ø_{KL}$).

Table C3 Influences of packing sequence (Y ---> KL) and corresponding platinum-supported beds (Pt/Y ---> Pt/KL)

Component	Y ---> KL			Pt/Y ---> Pt/KL		
	$Ø_{KL}$ = 0.25	$Ø_{KL}$ = 0.5	$Ø_{KL}$ = 0.75	$Ø_{Pt/KL}$ = 0.25	$Ø_{Pt/KL}$ = 0.5	$Ø_{Pt/KL}$ = 0.75
Methane	6.445	8.006	7.514	4.467	6.018	6.122
Ethylene	2.664	2.402	3.160	2.100	2.512	3.278
Ethane	5.032	6.003	5.754	4.286	4.782	5.091
Propylene	3.632	4.058	3.849	2.977	3.267	3.412
Propane	2.633	2.901	2.791	2.352	2.442	2.607
C4	6.541	6.720	6.843	5.801	5.963	6.561
C5	2.229	2.375	2.093	2.178	2.230	2.339
C6	0.156	0.084	0.066	0.064	0.124	0.117
C7	0.026	0.021	0.028	0.009	0.019	0.030
C8	0.002	0.001	0.001	0.004	0.003	0.003
Total	**29.36**	**32.57**	**32.10**	**24.24**	**27.36**	**29.56**

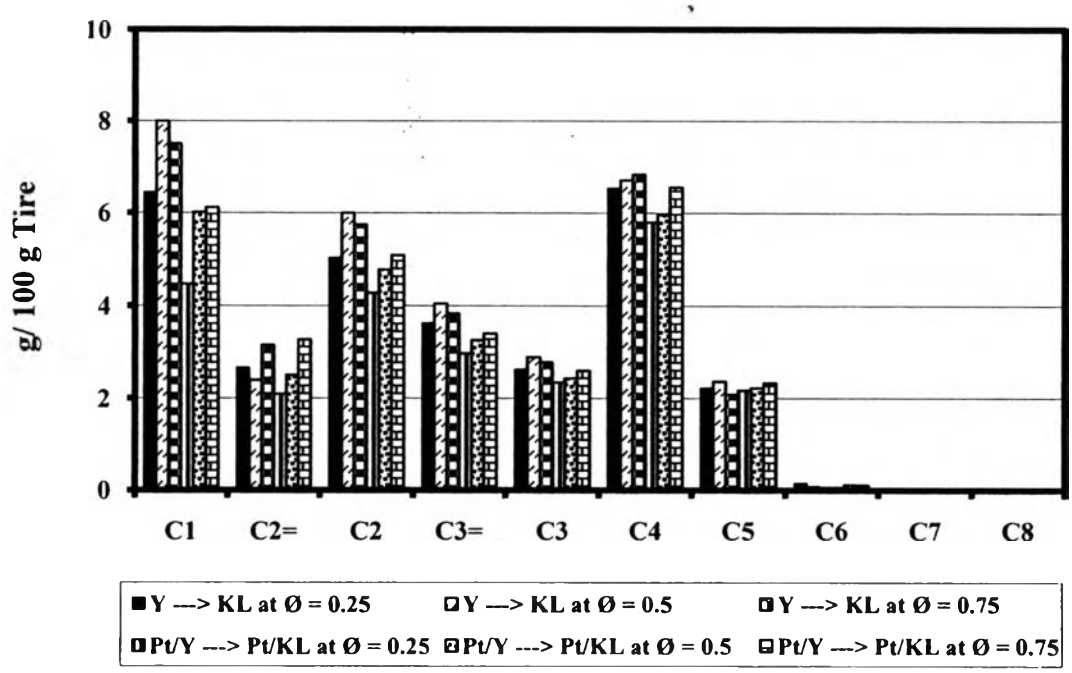

Figure C3 Pyrolysis gas composition obtained from packing sequence (Y ---> KL) and corresponding platinum-supported beds at various weight fractions of KL ($Ø_{KL}$).

Table C4 Influences of packing sequence (KL ---> Y) and corresponding platinum-supported beds (Pt/KL ---> Pt/Y)

Component	KL ---> Y			Pt/KL ---> Pt/Y		
	$Ø_{KL}$ = 0.25	$Ø_{KL}$ = 0.5	$Ø_{KL}$ = 0.75	$Ø_{Pt/KL}$ = 0.25	$Ø_{Pt/KL}$ = 0.5	$Ø_{Pt/KL}$ = 0.75
Methane	6.982	7.362	7.298	6.116	6.021	6.741
Ethylene	2.687	3.152	3.128	2.759	2.867	2.555
Ethane	5.134	5.816	5.848	5.259	5.376	4.833
Propylene	3.575	3.806	3.885	3.506	3.682	3.231
Propane	2.667	2.897	2.848	2.785	2.881	2.333
C4	6.526	6.810	6.976	6.753	6.975	5.708
C5	2.310	2.036	2.138	2.471	2.481	1.881
C6	0.095	0.090	0.137	0.137	0.117	0.108
C7	0.022	0.029	0.040	0.027	0.018	0.017
C8	0.004	0.002	0.004	0.005	0.002	0.002
Total	**30.00**	**32.00**	**32.30**	**29.82**	**30.42**	**27.41**

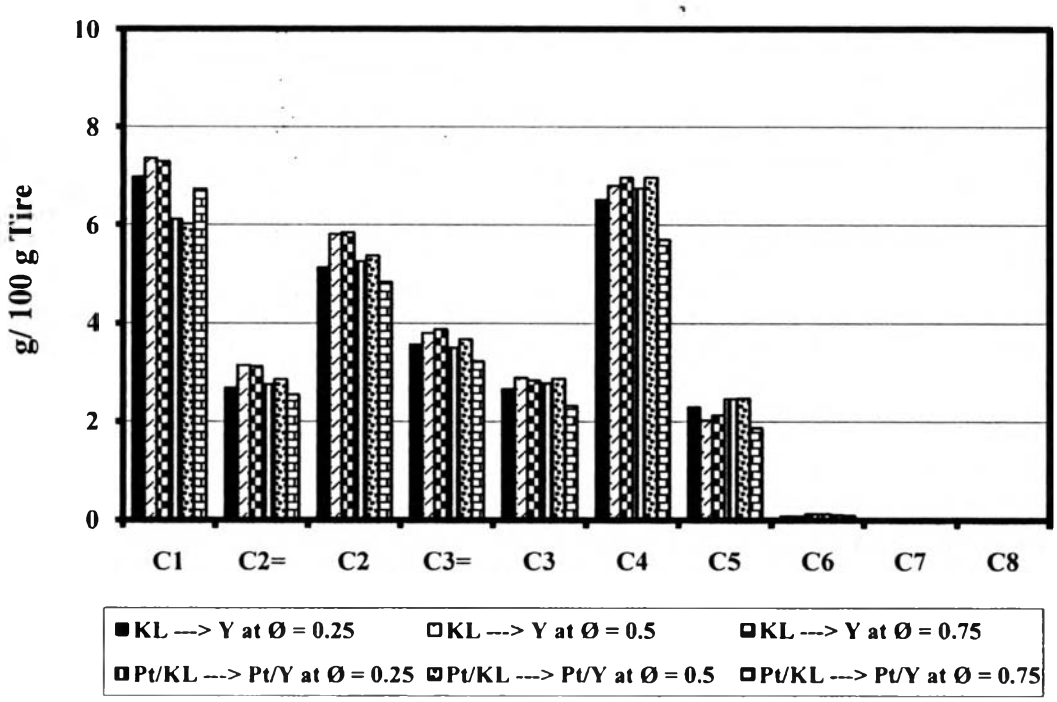

Figure C4 Pyrolysis gas composition obtained from packing sequence (Y ---> KL) and corresponding platinum-supported beds at various weight fractions of KL ($Ø_{KL}$).

D. True Boiling Point Distillation (°C)

Table D1 Non-catalytic case

% OFF	Boiling Point					
	Maltene	**Saturated Hydrocarbon**	**Mono-Aromatics**	**Di-Aromatics**	**Poly-Aromatics**	**Polar-Aromatics**
0	17.1	31.4	23.5	348.2	75.7	15.9
5	183.6	190.8	289.2	366.0	240.0	193.8
10	192.3	202.8	309.7	373.4	308.8	194.3
15	202.5	210.6	322.7	380.5	319.1	196.9
20	210.2	216.9	331.4	385.9	335.2	209.4
25	216.8	223.0	340.2	390.5	366.7	224.0
30	223.4	229.7	346.2	395.3	367.8	238.2
35	230.7	235.9	352.5	399.7	368.8	257.1
40	238.2	243.9	358.1	403.3	369.9	272.1
45	247.1	251.5	363.5	406.6	371.0	284.7
50	255.1	259.0	368.5	410.3	372.1	297.2
55	264.5	267.2	373.9	414.2	373.2	309.0
60	273	274.2	379.2	418.4	374.5	321.9
65	283.1	282.9	384.9	422.9	375.8	337.6
70	294.1	292.4	391.1	427.8	377.3	352.3
75	308.0	304.2	397.8	433.1	379.0	370.4
80	324.2	318.5	405.4	439.1	381.1	382.5
85	344.8	335.9	414.6	446.3	384.3	383.6
90	370.8	360.8	427.0	455.9	402.5	385.4
95	391.0	392.7	446.4	470.0	433.3	400.4
100	439.7	439.5	494.5	498.9	495.8	428.6

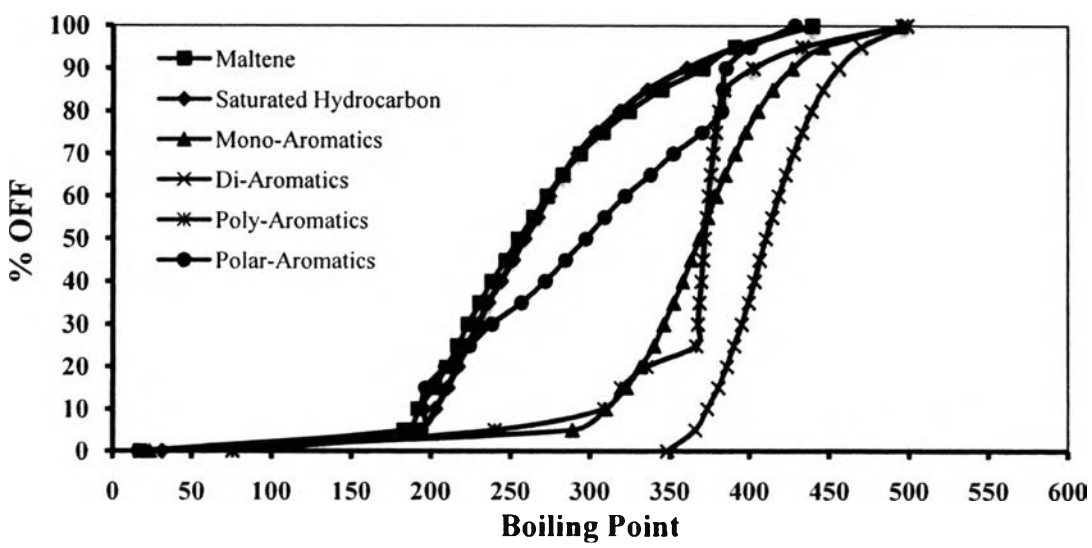

Figure D1 True boiling point distillation (°C) of non-catalytic case.

Table D2 Non-catalytic case

% OFF	Boiling Point					
	Maltene	**Saturated Hydrocarbon**	**Mono-Aromatics**	**Di-Aromatics**	**Poly-Aromatics**	**Polar-Aromatics**
0	27.5	39.0	23.5	22.2	23.9	22.7
5	162.3	184.2	163.8	27.1	73.3	39.2
10	173.8	192.5	208.2	35.0	74.2	177.1
15	189.8	203.4	231.7	76.4	75.4	190.6
20	199.2	210.7	252.1	184.7	158.8	197.6
25	208.0	216.8	269.9	199.8	172.8	203.8
30	214.3	223.6	283.3	212.4	192.3	211.9
35	222.4	230.6	291.8	226.7	213.9	222.6
40	230.5	237.5	301.3	241.9	250.3	234.8
45	238.6	246.5	307.6	263.3	272.8	247.7
50	249.3	255.0	314.5	291.0	296.0	261.0
55	259.7	264.9	321.1	323.9	313.1	274.1
60	271.0	273.8	327.7	342.6	334.5	287.3
65	282.2	283.8	334.1	354.7	344.0	300.0
70	294.7	295.2	341.8	365.3	373.7	313.8
75	310.5	309.3	349.8	376.7	383.6	329.3
80	327.8	325.7	359.1	389.4	384.3	347.0
85	347.9	345.8	370.4	404.7	385.2	367.5
90	372.1	370.2	385.7	423.3	388.0	390.8
95	400.7	401.1	410.3	451.0	415.2	424.0
100	464.9	459.8	480.0	499.9	487.3	498.4

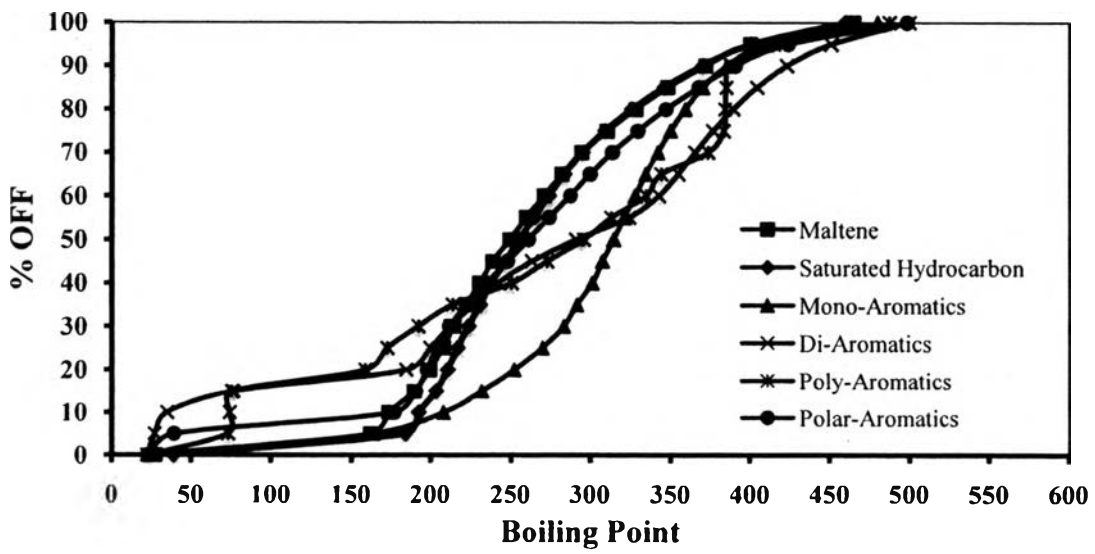

Figure D2 True boiling point distillation (°C) of non-catalytic case

Table D3 KL Zeolite

% OFF	Boiling Point					
	Maltene	**Saturated Hydrocarbon**	**Mono-Aromatics**	**Di-Aromatics**	**Poly-Aromatics**	**Polar-Aromatics**
0	36.9	75.7	23.3	21.8	23.3	22.5
5	154.1	170.3	208.8	23.3	74.0	36.3
10	158.1	182.4	253.7	25.2	194.8	75.1
15	169.5	189.9	274.9	27.8	254.6	173.0
20	172.5	197.4	286.9	30.7	282.9	193.5
25	184.8	203.2	292.2	33.7	320.0	197.4
30	191.3	209.4	300.0	37.1	363.0	202.8
35	201.0	213.6	304.2	73.8	381.3	212.8
40	207.2	219.5	307.6	234.0	381.6	227.0
45	212.9	224.8	312.0	276.2	381.8	241.7
50	219.5	230.6	316.5	308.8	382.1	257.4
55	226.3	236.3	321.1	333.8	382.4	271.2
60	233.4	244.0	326.0	348.3	382.7	286.4
65	242.6	251.8	330.4	358.5	383.0	300.3
70	252.6	260.3	336.1	368.2	383.4	315.6
75	264.6	270.1	343.0	378.5	383.8	332.0
80	278.0	280.9	350.5	390.0	384.4	351.0
85	296.5	295.1	360.0	403.0	385.1	373.4
90	323.5	316.3	373.2	418.8	386.1	394.4
95	368.9	350.7	396.5	441.5	393.3	425.8
100	437.0	434.1	471.6	484.7	476.7	497.1

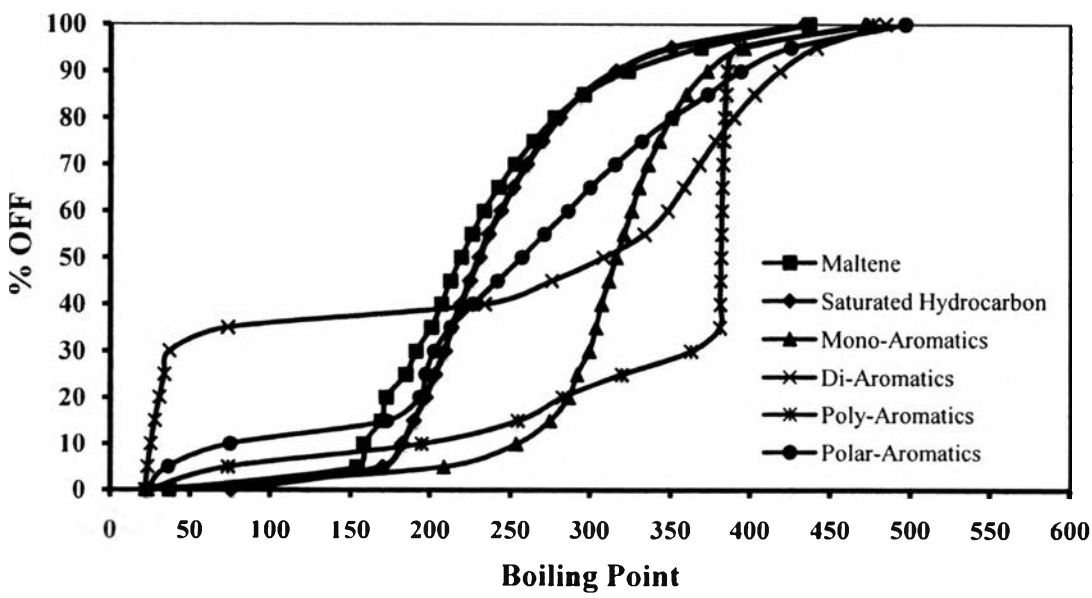

Figure D3 True boiling point distillation (°C) of KL zeolite.

Table D4 KL zeolite

% OFF	Boiling Point					
	Maltene	**Saturated Hydrocarbon**	**Mono-Aromatics**	**Di-Aromatics**	**Poly-Aromatics**	**Polar-Aromatics**
0	30.1	34.1	29.0	22.5	23.7	23.1
5	157.0	172.1	180.7	29.9	75.5	40.9
10	169.9	185.7	199.5	74.6	199.0	173.7
15	178.2	192.8	219.8	196.7	234.6	190.3
20	188.9	202.2	246.1	215.7	258.3	195.4
25	197.3	207.8	268.4	229.2	283.6	198.4
30	204.2	212.8	275.4	242.6	312.3	205.0
35	211.0	218.2	286.3	256.5	325.3	213.0
40	216.4	222.9	293.3	268.4	341.7	224.8
45	222.1	228.6	301.8	285.9	381.2	235.8
50	228.4	233.8	308.1	303.6	381.8	248.0
55	234.4	239.9	315.5	322.4	382.1	260.4
60	241.8	247.0	321.8	339.6	382.4	273.1
65	250.2	254.2	328.3	352.0	382.8	286.7
70	259.1	262.4	334.9	361.0	383.2	300.2
75	269.9	271.4	342.5	370.1	383.7	315.5
80	281.7	281.8	351.4	380.1	384.2	333.4
85	297.9	295.3	361.7	390.4	384.9	355.2
90	322.4	315.7	373.7	406.4	385.9	384.3
95	362.8	349.3	393.1	432.0	391.9	413.6
100	435.0	433.0	458.5	495.3	474.1	494.1

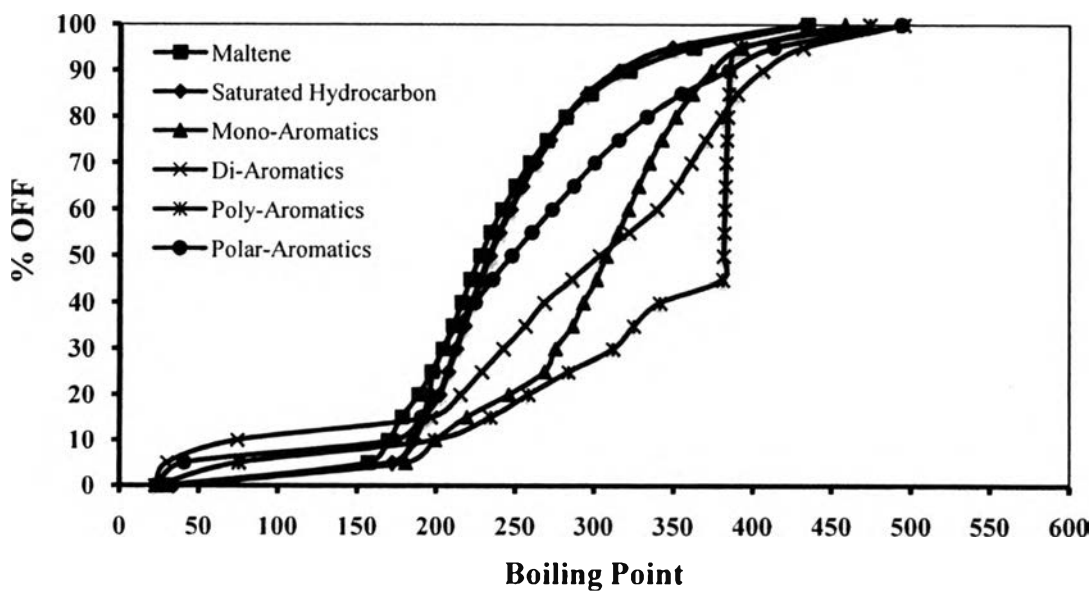

Figure D4 True boiling point distillation (°C) of KL zeolite.

Table D5 Y zeolite

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	24.8	25.0	23.1	22.2	22.7	20.8
5	172.5	180.5	191.1	23.3	35.8	32.4
10	186.7	191.3	239.2	25.2	197.9	159.8
15	193.9	200.4	262.2	27.3	218.2	168.8
20	203.3	205.6	273.2	30.1	235.4	177.0
25	208.4	211.9	282.6	32.9	255.2	196.1
30	213.9	216.1	288.4	35.6	268.5	207.3
35	219.7	221.4	294.6	38.6	287.6	226.1
40	224.9	227.0	301.7	74.6	306.1	245.5
45	231.6	232.4	306.6	256.4	311.9	266.6
50	237.1	237.7	312.5	283.2	312.7	287.5
55	245.3	245.2	317.9	312.8	315.6	308.7
60	253.5	252.4	323.3	338.7	333.1	330.5
65	262.6	260.2	328.7	355.0	336.7	358.9
70	272.4	269.1	334.3	366.7	337.9	383.2
75	283.3	278.1	340.9	377.5	345.3	383.8
80	296.7	289.4	348.3	389.4	366.0	384.4
85	314.8	304.3	357.9	403.4	385.2	385.0
90	339.3	326.5	370.3	419.8	388.8	386.1
95	380.9	362.3	391.7	445.7	418.1	396.3
100	545.9	450.0	481.5	501.8	500.6	479.8

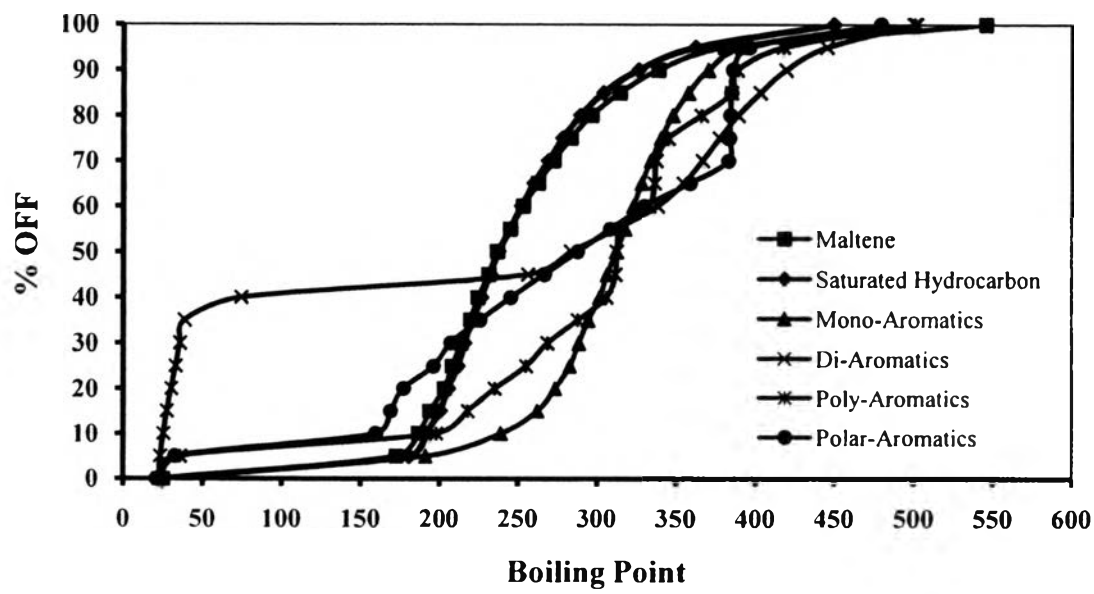

Figure D5 True boiling point distillation (°C) of Y zeolite.

Table D6 Y zeolite

% OFF	Boiling Point					
	Maltene	**Saturated Hydrocarbon**	**Mono-Aromatics**	**Di-Aromatics**	**Poly-Aromatics**	**Polar-Aromatics**
0	71.8	26.1	22.9	22.2	35.2	22.2
5	156.1	169.6	39.9	25.2	67.7	28.6
10	168.9	180.0	182.7	30.1	68.7	38.6
15	172.0	186.7	211.5	35.8	69.3	74.4
20	182.8	192.9	231.0	74.1	69.7	75.6
25	188.2	201.7	248.6	78.5	70.0	190.5
30	194.5	205.8	266.4	173.9	70.4	227.7
35	201.8	211.9	281.7	225.3	70.8	250.6
40	207.3	216.9	293.4	258.6	71.2	269.3
45	213.3	222.1	304.4	280.0	71.6	284.5
50	219.9	228.6	313.2	294.9	71.9	296.3
55	227.5	235.0	321.1	308.7	72.6	308.3
60	235.6	243.1	328.3	321.3	73.7	320.4
65	247.2	252.7	335.1	332.3	75.3	332.8
70	260.3	263.3	341.9	343.5	78.0	347.1
75	274.7	274.4	349.2	355.1	156.4	363.7
80	291.8	287.2	357.4	367.0	181.0	383.2
85	314.1	304.0	367.1	380.9	256.3	386.9
90	343.5	326.8	380.3	399.0	341.9	398.1
95	384.0	360.8	403.7	427.2	383.5	427.3
100	452.3	437.4	477.5	485.0	423.0	492.0

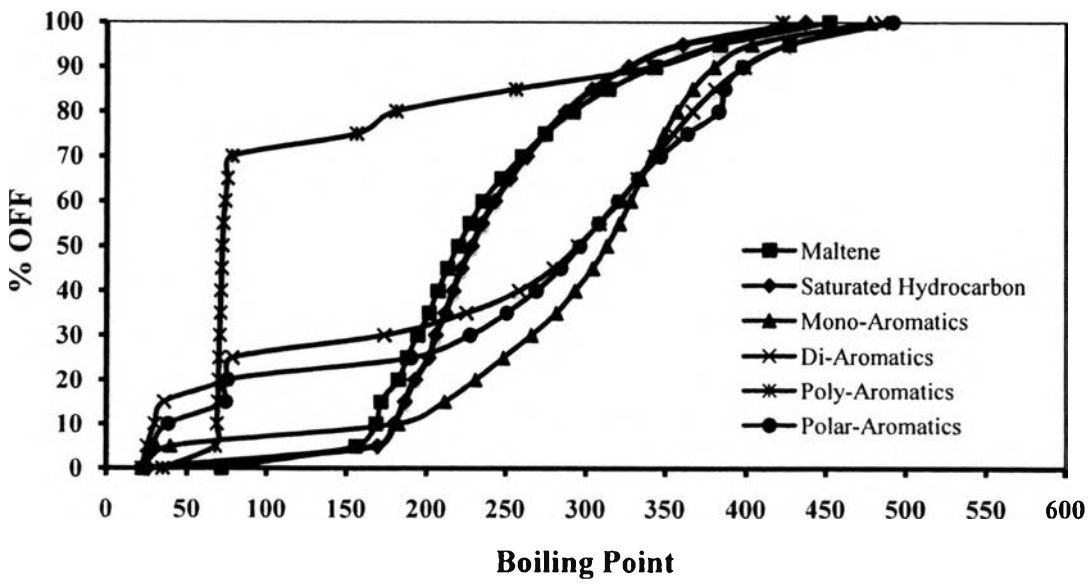

Figure D6 True boiling point distillation (°C) of Y zeolite.

Table D7 Physical mixture (Y + KL) at $Ø_{KL}$ = 0.25

% OFF	Boiling Point					
	Maltene	**Saturated Hydrocarbon**	**Mono-Aromatics**	**Di-Aromatics**	**Poly-Aromatics**	**Polar-Aromatics**
0	75.2	74.8	26.5	22.7	23.7	22.7
5	153.0	163.1	192.7	35.6	73.8	35.4
10	156.8	170.9	236.9	80.7	163.6	172.4
15	167.3	180.7	274.8	167.9	198.9	193.0
20	170.3	186.5	292.8	172.5	230.2	197.4
25	175.9	192.6	304.7	182.2	261.2	202.0
30	184.1	201.1	312.5	188.0	296.6	211.0
35	190.8	206.8	320.3	194.4	314.1	220.9
40	199.6	212.8	326.4	202.6	337.5	232.8
45	206.1	219.1	332.1	209.5	358.2	245.3
50	213.2	226.4	338.3	219.8	382.1	258.5
55	220.8	234.0	343.7	232.9	382.4	271.8
60	230.2	243.9	349.3	256.9	382.8	285.2
65	240.9	254.5	355.0	295.1	383.1	296.9
70	254.9	267.1	361.3	330.8	383.5	310.1
75	271.4	279.2	367.7	352.7	383.9	323.8
80	288.8	293.6	375.4	364.8	384.5	340.8
85	311.7	312.1	384.7	377.2	385.1	361.7
90	339.7	335.5	397.3	392.3	386.2	387.4
95	380.2	369.8	416.8	418.7	394.0	420.9
100	442.7	441.5	475.7	485.7	474.3	493.9

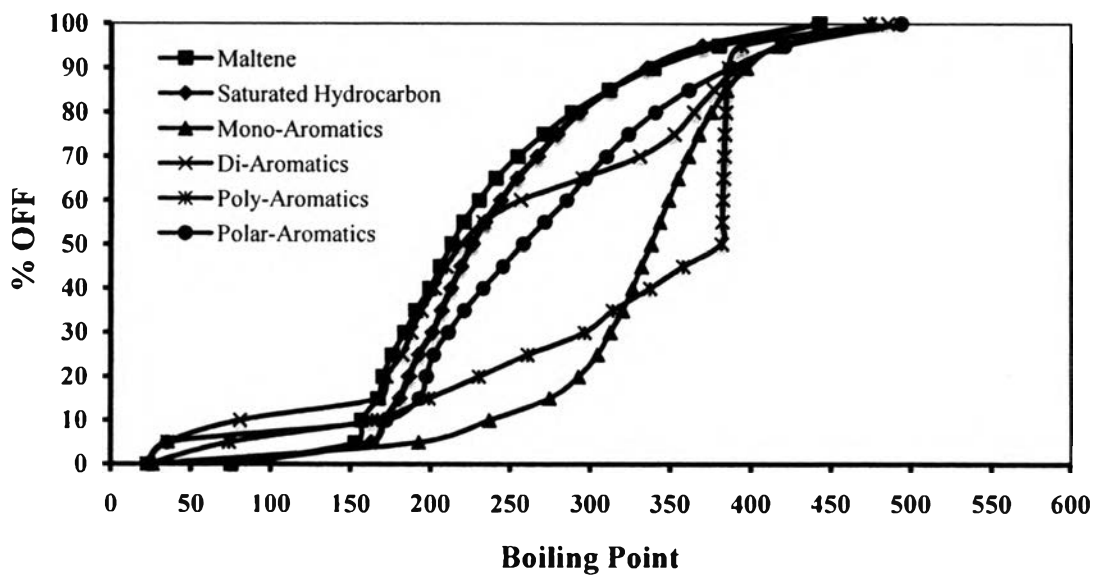

Figure D7 True boiling point distillation (°C) of physical mixture (Y + KL) at $Ø_{KL}$ = 0.25

Table D8 Physical mixture (Y + KL) at $Ø_{KL}$ = 0.5

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	28.6	71.6	25.8	23.9	22.7	22.2
5	154.4	158.8	157.7	75.6	70.6	127.2
10	160.2	170.7	180.0	157.1	71.1	172.1
15	169.8	181.2	195.4	168.6	71.7	188.4
20	173.6	187.9	215.4	171.3	72.9	194.4
25	184.3	195.6	247.7	175.3	156.8	195.9
30	191.1	202.5	270.1	184.7	173.9	200.4
35	200.5	209.7	282.6	188.8	196.7	207.9
40	206.8	215.5	290.4	194.3	222.5	215.4
45	213.9	221.8	297.7	202.8	258.8	227.5
50	221.5	229.7	304.4	208.6	294.9	239.7
55	230.6	237.5	310.7	218.4	313.5	254.6
60	240.6	248.0	317.2	231.4	336.9	268.9
65	253.6	258.7	324.3	259.4	350.3	284.0
70	267.7	270.1	331.2	300.6	381.9	297.1
75	281.5	281.5	339.3	313.5	383.1	311.5
80	297.5	294.9	348.0	326.4	383.7	328.0
85	316.8	312.0	358.5	339.7	384.4	349.1
90	340.2	333.4	371.9	354.9	385.4	376.6
95	375.1	364.9	393.7	378.4	392.5	407.7
100	436.7	432.5	462.0	458.2	473.3	489.8

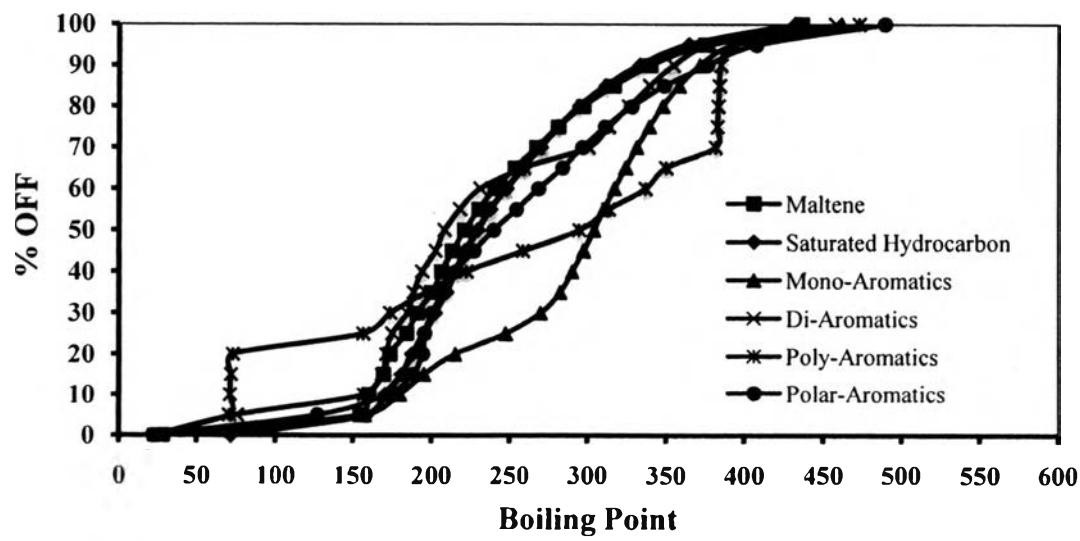

Figure D8 True boiling point distillation (°C) of physical mixture (Y + KL) at $Ø_{KL}$ = 0.5.

Table D9 Physical mixture (Y + KL) at $Ø_{KL}$ = 0.75

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	39.4	74.7	26.9	22.7	25.4	21.6
5	121.5	160.9	75.4	34.8	70.0	28.0
10	152.9	170.8	172.5	71.0	70.4	72.1
15	156.6	179.8	257.3	73.3	70.8	172.3
20	166.6	185.3	273.4	74.1	71.3	188.8
25	169.5	190.6	285.1	75.2	71.9	199.5
30	172.0	198.8	291.2	76.9	72.7	208.0
35	181.9	203.0	297.7	78.9	74.1	216.1
40	187.6	209.6	303.6	81.5	77.3	226.5
45	193.9	214.5	309.0	158.0	169.2	236.7
50	201.9	220.5	315.2	190.1	195.5	248.0
55	209.3	227.7	320.8	213.9	229.3	259.3
60	216.8	235.0	327.8	251.5	301.3	270.2
65	225.0	244.8	334.2	297.1	338.1	282.8
70	235.7	255.3	341.7	313.7	380.2	294.5
75	250.6	268.0	349.9	326.8	380.9	308.3
80	268.3	280.6	359.2	340.2	381.6	325.3
85	287.3	296.5	370.3	354.1	382.5	347.0
90	314.3	318.6	384.9	370.5	383.7	376.9
95	355.4	351.4	407.9	395.5	386.1	412.7
100	422.0	423.9	477.2	467.6	456.2	485.6

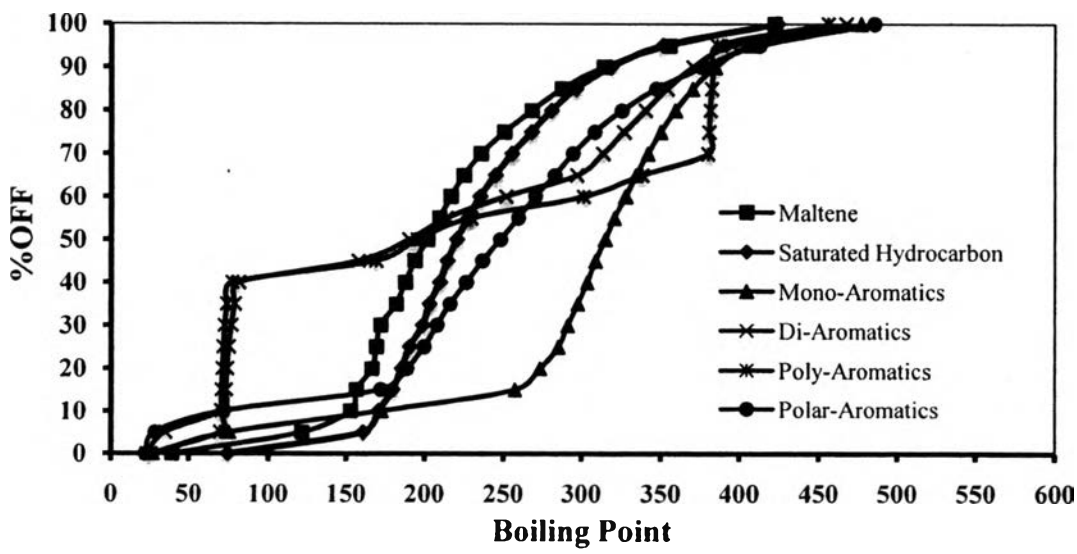

Figure D9 True boiling point distillation (°C) of physical mixture (Y + KL) at $Ø_{KL}$ = 0.75.

Table D10 Packing sequence (Y ---> KL) at $Ø_{KL}$ = 0.25

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	26.7	73.7	24.8	22.9	23.7	22.0
5	142.9	167.4	75.6	55.2	71.6	27.1
10	154.5	172.1	85.9	74.1	71.9	35.6
15	160.1	183.9	206.5	75.9	72.3	74.8
20	169.5	190.6	252.9	79.8	72.7	187.2
25	172.3	199.6	275.2	156.7	73.1	200.2
30	183.9	205.7	287.9	172.5	73.5	206.5
35	191.1	212.4	294.7	187.8	74.1	214.5
40	201.3	218.7	303.7	202.9	75.4	224.7
45	208.8	226.1	309.7	222.2	80.9	235.5
50	217.2	233.7	317.0	260.0	192.9	247.6
55	226.5	243.5	324.1	304.8	228.5	261.1
60	236.8	253.9	331.3	317.7	268.5	274.8
65	251.4	265.2	339.0	327.0	312.2	289.4
70	266.7	276.6	346.8	336.9	330.8	304.1
75	282.4	289.3	355.1	345.4	340.5	320.8
80	300.7	305.3	364.6	355.3	370.3	339.8
85	324.0	325.9	375.5	366.6	383.9	362.2
90	352.6	353.2	389.0	382.3	385.2	389.6
95	386.5	388.3	409.0	408.3	393.6	425.1
100	454.6	453.7	467.6	476.4	469.9	487.3

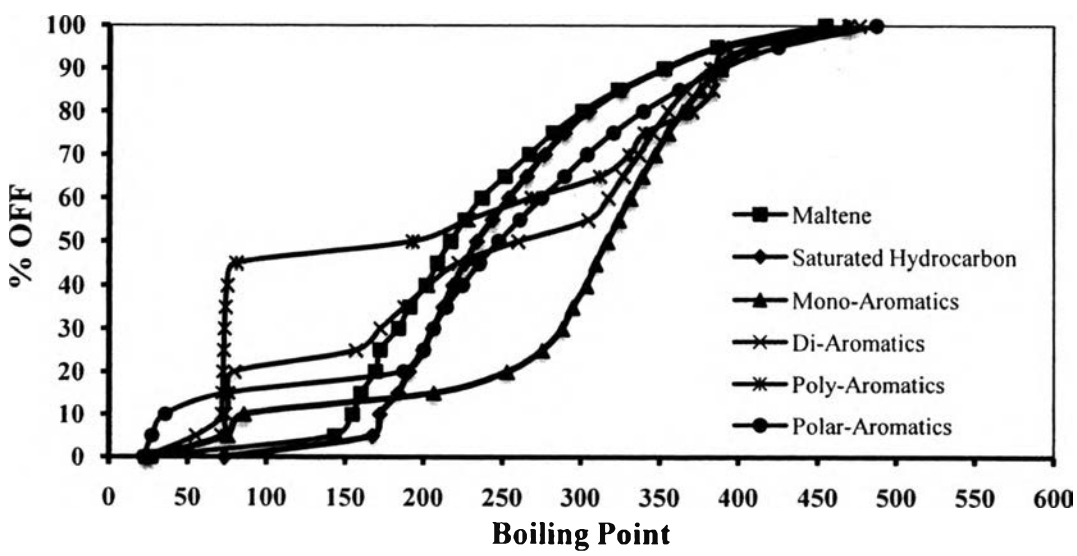

Figure D10 True boiling point distillation (°C) of packing sequence (Y ---> KL) at $Ø_{KL}$ = 0.25.

Table D11 Packing sequence (Y ---> KL) at $Ø_{KL}$ = 0.5

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	27.8	77.1	37.1	23.3	23.1	22.7
5	113.6	158.9	171.3	75.4	71.9	36.9
10	151.5	169.9	189.0	185.2	74.1	180.9
15	154.9	177.7	204.3	204.4	74.8	195.1
20	163.1	184.3	224.9	224.1	77.4	198.4
25	168.9	191.1	254.4	252.2	179.9	204.2
30	171.8	200.2	271.3	288.8	210.6	213.0
35	182.2	205.9	280.2	304.0	254.8	225.2
40	190.0	212.4	288.7	311.2	290.5	239.3
45	200.3	218.7	296.4	319.8	312.5	255.6
50	208.5	225.8	303.9	326.1	315.8	272.1
55	218.0	233.8	311.3	332.1	336.7	288.2
60	228.4	243.6	318.8	338.9	339.5	303.9
65	241.2	254.3	326.9	344.7	356.5	322.9
70	257.3	266.0	334.5	351.0	376.7	347.5
75	274.2	277.7	343.6	357.5	384.1	383.1
80	292.4	291.3	354.2	365.2	384.7	384.6
85	314.8	309.5	366.3	374.7	385.5	385.3
90	342.3	333.5	380.5	387.3	387.4	386.6
95	381.7	370.1	404.0	409.3	408.6	402.2
100	442.3	444.3	465.3	473.5	478.9	479.8

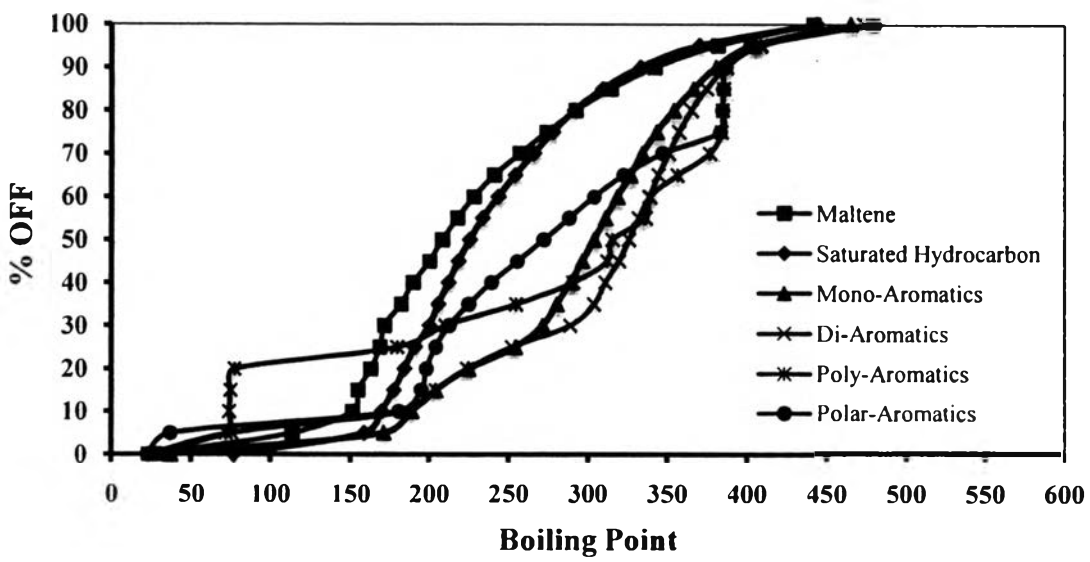

Figure D11 True boiling point distillation (°C) of packing sequence (Y ---> KL) at $Ø_{KL}$ = 0.5.

Table D12 Packing sequence (Y ---> KL) at $Ø_{KL}$ = 0.75

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	31.2	37.3	69.1	25.6	58.1	21.8
5	150.0	83.0	156.6	69.3	59.2	23.7
10	155.2	158.9	169.6	70.2	60.3	29.5
15	160.1	170.0	174.3	71.0	61.3	36.9
20	169.6	176.5	184.5	72.2	62.4	74.5
25	172.4	187.7	191.2	73.6	63.4	176.8
30	183.9	203.5	200.7	76.1	64.5	200.0
35	190.9	237.3	206.6	80.2	65.6	206.2
40	201.0	270.8	213.0	151.8	66.6	213.6
45	208.0	283.8	219.7	157.1	67.7	225.4
50	216.1	292.0	226.9	167.9	68.7	237.5
55	224.5	301.4	234.8	171.4	69.3	251.4
60	234.9	308.9	244.9	184.0	69.7	266.5
65	248.2	317.1	255.6	205.6	70.0	281.9
70	262.9	325.5	267.7	292.1	70.4	298.1
75	277.7	333.6	279.2	322.9	70.9	318.1
80	294.2	343.1	292.5	339.9	72.0	340.9
85	314.6	354.4	310.2	353.1	73.6	371.8
90	338.5	368.2	332.1	367.3	76.1	387.6
95	373.5	388.6	364.4	386.6	156.5	404.7
100	437.4	449.3	432.2	443.4	386.5	466.1

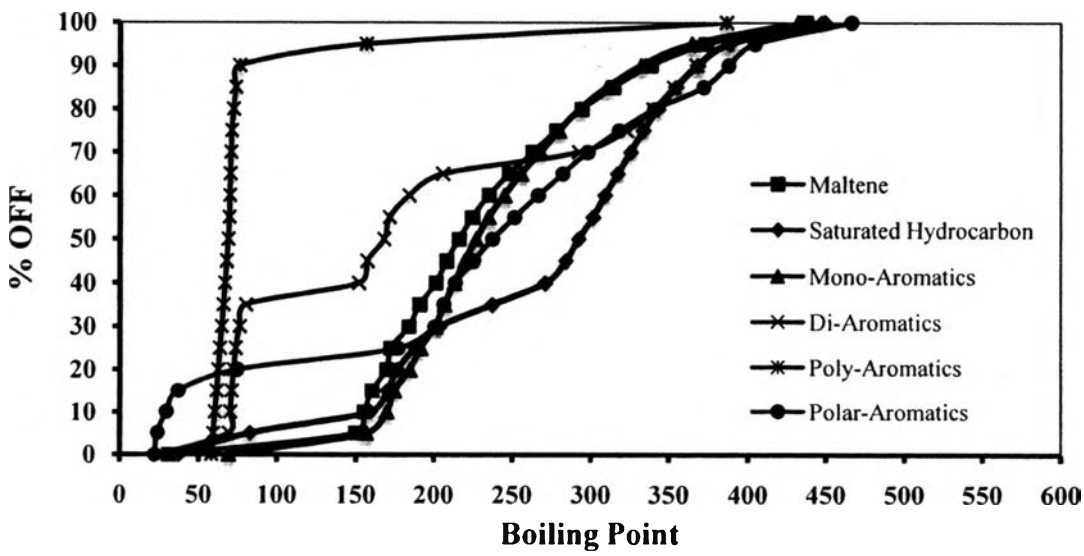

Figure D12 True boiling point distillation (°C) of packing sequence (Y ---> KL) at $Ø_{KL}$ = 0.75.

Table D13 Packing sequence (KL ---> Y) at $Ø_{KL}$ = 0.25

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	32.0	34.1	38.4	27.8	27.5	21.6
5	152.2	78.9	181.1	227.7	72.5	28.6
10	155.6	155.3	193.0	246.2	73.3	73.0
15	161.5	167.6	210.5	255.2	74.8	172.7
20	169.9	170.7	212.9	265.7	206.1	199.5
25	172.6	178.2	224.5	272.9	274.3	210.3
30	184.4	184.8	229.9	279.7	288.5	225.4
35	191.4	191.2	233.9	287.3	297.4	240.9
40	201.7	200.4	244.7	292.3	305.7	256.2
45	209.1	205.1	250.4	299.9	313.5	269.3
50	217.5	213.0	259.5	306.6	321.4	282.7
55	226.4	219.7	266.3	314.5	329.1	294.6
60	236.7	226.5	275.4	322.8	337.9	308.8
65	250.9	236.5	283.5	331.4	345.8	316.4
70	265.9	248.7	293.0	340.8	354.0	331.9
75	281.2	262.6	304.8	351.7	362.9	341.8
80	299.1	277.8	319.8	363.9	372.9	360.8
85	321.9	297.5	337.1	376.3	384.2	385.2
90	349.8	326.5	361.3	393.5	398.5	388.9
95	385.5	370.6	394.6	417.2	420.2	422.3
100	454.3	447.4	462.0	472.9	481.6	491.6

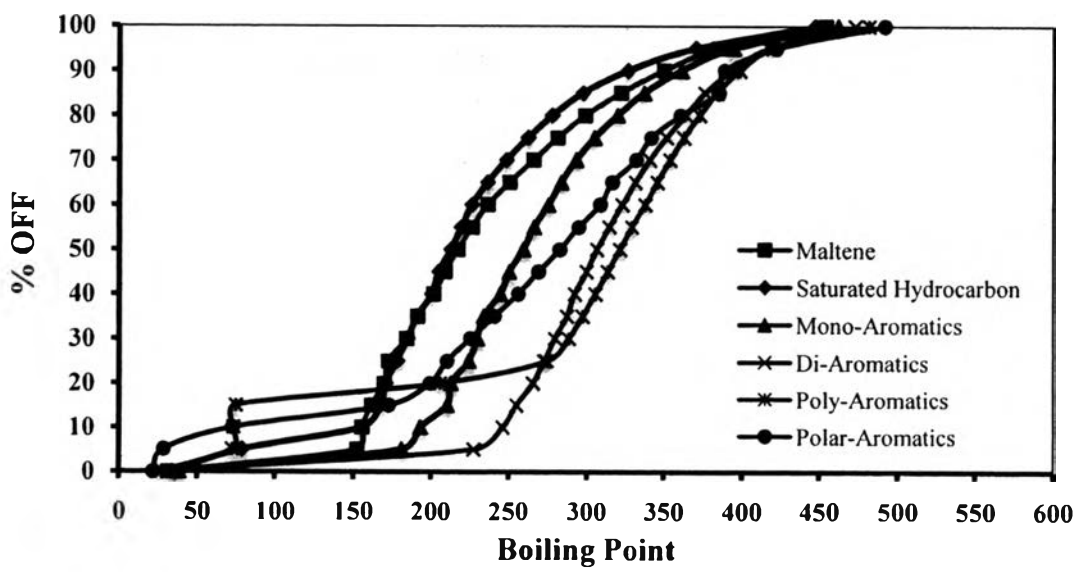

Figure D13 True boiling point distillation (°C) of packing sequence (KL ---> Y) at $Ø_{KL}$ = 0.25.

Table D14 Packing sequence (KL ---> Y) at $Ø_{KL}$ = 0.5

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	28.0	75.1	30.7	29.0	33.1	22.0
5	156.0	170.1	76.2	83.0	66.0	74.2
10	168.1	181.5	162.6	231.6	67.0	159.4
15	172.5	189.1	210.5	252.6	68.1	185.8
20	185.2	196.8	215.4	264.7	69.1	196.5
25	192.8	202.7	230.7	273.6	69.4	205.9
30	203.1	209.6	237.0	283.1	69.8	215.5
35	210.6	215.4	248.2	289.8	70.2	235.3
40	217.8	220.8	255.4	296.9	70.6	249.1
45	224.6	227.7	264.7	303.6	71.0	262.6
50	233.0	234.9	272.6	310.1	71.3	276.9
55	243.0	243.2	279.9	317.6	72.2	291.0
60	253.9	253.0	287.4	325.7	73.7	306.2
65	265.9	263.2	295.3	333.5	76.7	312.8
70	277.7	273.3	304.7	341.9	243.8	326.9
75	291.1	284.5	315.9	351.3	293.6	337.0
80	307.5	298.6	328.3	362.5	312.3	351.1
85	326.6	317.4	342.6	374.9	328.6	383.3
90	350.5	340.6	362.2	391.6	347.6	385.2
95	384.2	375.0	388.9	416.4	371.7	394.3
100	453.8	451.5	459.7	474.5	447.0	480.9

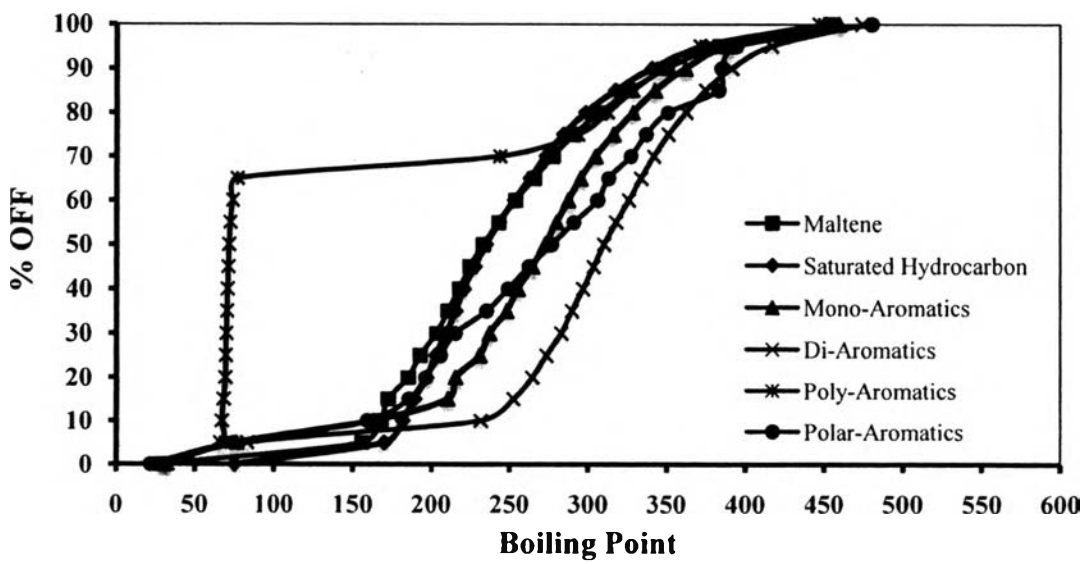

Figure D14 True boiling point distillation (°C) of packing sequence (KL ---> Y) at $Ø_{KL}$ = 0.5.

Table D15 Packing sequence (KL ---> Y) at $Ø_{KL}$ = 0.75

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	36.9	37.7	30.7	56.9	66.6	23.3
5	149.9	169.0	76.4	69.7	67.9	156.6
10	154.6	173.7	157.3	71.0	69.0	157.9
15	159.2	185.2	191.3	72.7	69.4	163.8
20	169.2	191.7	210.1	77.0	69.7	187.9
25	172.1	201.0	213.8	112.7	70.1	198.6
30	183.7	205.8	229.0	156.7	70.5	213.0
35	191.2	212.7	234.1	169.4	71.1	233.1
40	201.6	218.7	245.4	181.3	71.9	254.2
45	209.9	223.7	254.4	213.6	72.9	271.0
50	218.4	231.7	263.6	253.2	74.3	288.1
55	227.9	239.7	273.0	271.9	76.7	304.4
60	239.3	250.5	281.4	285.2	156.5	314.1
65	254.2	261.2	290.6	296.8	194.1	332.7
70	270.1	272.5	300.4	307.8	290.3	341.6
75	285.6	284.8	312.9	319.8	310.0	365.8
80	304.3	300.3	326.3	331.9	326.6	383.8
85	325.4	320.7	341.1	345.1	342.4	384.7
90	350.2	345.1	360.5	361.6	359.2	386.3
95	383.1	377.9	385.2	383.0	382.3	412.8
100	447.7	445.7	451.2	456.2	458.7	482.7

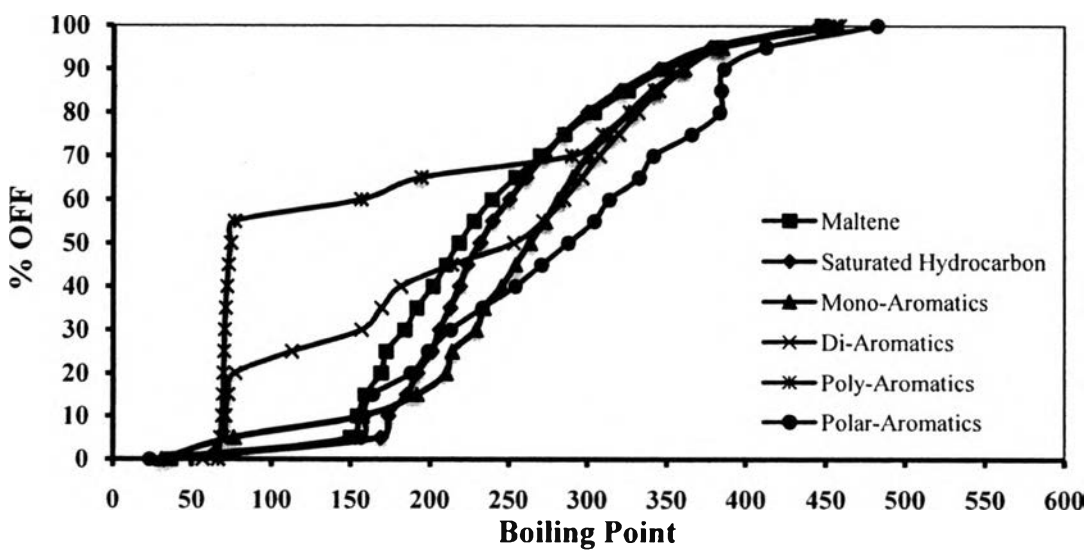

Figure D15 True boiling point distillation (°C) of packing sequence (KL ---> Y) at $Ø_{KL}$ = 0.75.

Table D16 Pt/KL

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	26.1	53.2	23.3	23.5	69.6	22.7
5	112.3	75.2	36.3	53.0	74.2	155.3
10	152.9	86.2	59.2	70.4	82.1	155.7
15	156.3	167.5	70.3	73.6	84.5	156.1
20	164.8	171.9	73.2	74.9	86.5	156.8
25	169.6	183.1	74.6	76.3	88.4	157.9
30	172.1	189.5	75.6	77.6	90.5	161.2
35	182.2	196.7	76.6	79.9	92.8	171.8
40	188.4	203.2	77.6	83.2	95.0	196.5
45	193.7	209.8	78.5	104.8	97.5	204.3
50	202.5	214.8	79.6	107.8	98.9	212.4
55	209.5	222.2	81.7	109.0	100.1	213.2
60	215.3	229.4	84.5	110.6	101.7	213.5
65	224.0	237.3	111.6	114.2	104.0	213.9
70	232.4	248.9	120.3	118.2	108.3	215.6
75	244.7	262.4	186.9	148.3	126.5	233.6
80	260.6	278.6	210.1	160.4	134.8	262.0
85	281.4	299.0	244.1	192.0	145.8	293.6
90	309.8	325.8	308.6	225.8	153.6	330.1
95	350.0	362.8	373.4	353.6	168.5	376.7
100	433.0	435.5	462.1	467.9	399.7	461.5

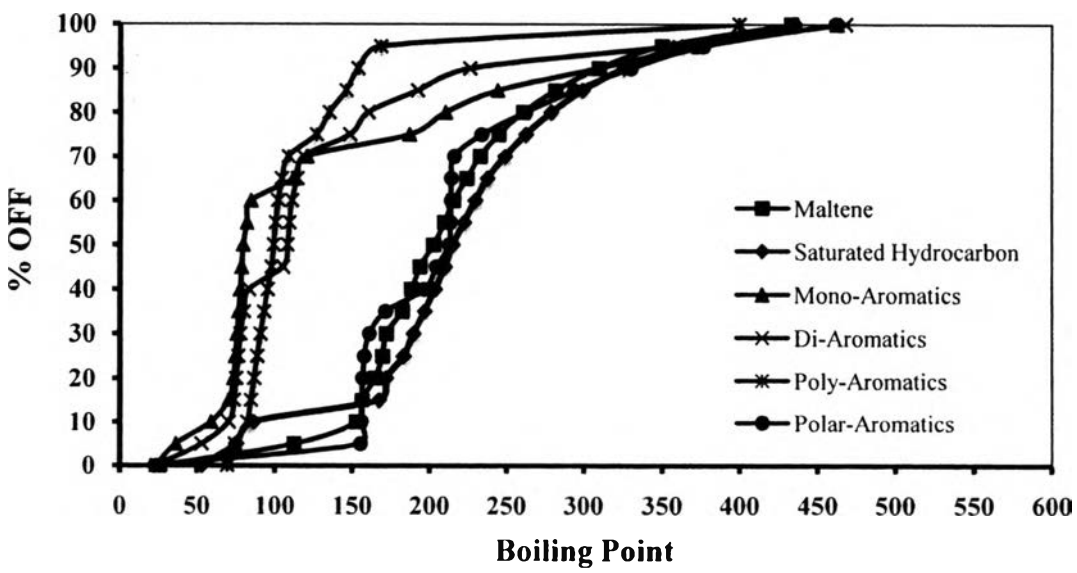

Figure D16 True boiling point distillation (°C) of Pt/KL.

Table D17 Pt/Y

% OFF	Boiling Point					
	Maltene	**Saturated Hydrocarbon**	**Mono-Aromatics**	**Di-Aromatics**	**Poly-Aromatics**	**Polar-Aromatics**
0	22.5	61.5	32.2	33.5	63.9	22.0
5	112.2	78.3	71.9	73.2	64.9	38.4
10	153.6	155.6	74.3	77.1	66.0	157.2
15	156.1	168.7	78.6	149.4	67.0	158.6
20	160.7	171.6	156.2	158.6	68.1	164.9
25	169.6	180.3	190.8	170.3	69.1	177.6
30	172.1	185.3	209.2	179.9	69.4	197.0
35	181.7	191.7	212.3	191.7	69.8	207.8
40	188.1	200.7	226.2	217.7	70.4	226.0
45	196.0	206.4	231.1	253.4	71.2	246.2
50	204.6	213.6	236.8	271.1	72.3	265.0
55	213.5	220.5	248.5	284.2	74.0	282.7
60	222.9	229.3	258.4	294.3	77.3	299.8
65	233.9	239.3	269.0	305.6	156.9	312.3
70	248.7	252.4	278.8	317.2	175.5	320.4
75	265.1	266.5	290.2	329.4	275.8	336.4
80	283.2	282.0	303.4	341.8	305.7	340.6
85	305.2	302.6	321.1	356.5	325.9	366.2
90	331.9	329.5	342.8	373.4	348.1	386.6
95	368.8	368.3	374.4	397.8	374.4	414.6
100	441.8	439.2	446.5	454.3	443.9	480.8

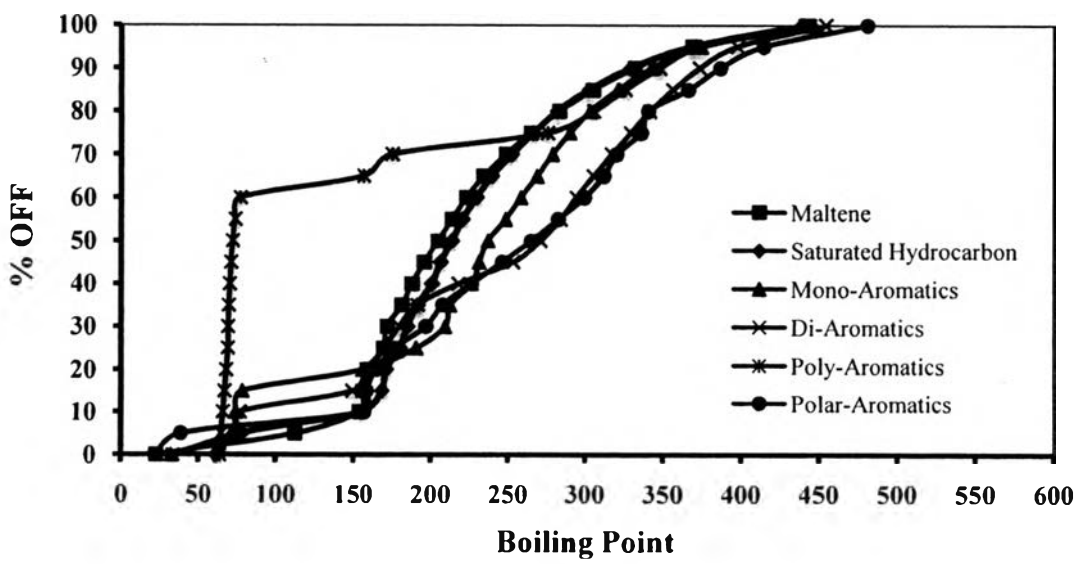

Figure D17 True boiling point distillation (°C) of Pt/Y.

Table D18 Physical mixture (Pt/Y + Pt/KL) at $Ø_{Pt/KL}$ = 0.25

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	38.4	56.0	23.7	25.6	72.3	21.4
5	150.9	72.9	39.9	60.3	81.2	155.1
10	155.1	77.8	54.9	71.1	83.6	155.5
15	164.9	156.9	64.7	72.6	85.6	155.7
20	170.0	170.9	70.4	73.8	87.6	155.9
25	175.6	182.7	71.6	75.1	89.7	156.1
30	184.9	190.6	72.3	77.1	91.9	156.4
35	192.2	201.3	73.0	79.9	94.1	157.0
40	202.1	209.7	73.7	85.8	96.6	158.3
45	210.2	217.2	74.3	104.7	98.6	163.5
50	218.0	225.6	74.9	106.0	99.9	170.0
55	226.5	233.8	75.6	107.4	101.5	187.3
60	235.7	244.9	76.5	109.6	104.0	204.0
65	248.3	256.0	77.7	113.4	109.0	213.0
70	261.7	269.0	79.4	117.6	126.5	215.1
75	276.3	282.1	81.5	147.9	134.1	241.3
80	293.5	297.3	84.7	159.4	144.4	276.0
85	314.6	314.8	112.7	186.7	152.9	313.5
90	340.1	335.8	201.0	195.6	168.7	347.3
95	375.6	365.9	327.0	232.8	302.6	389.4
100	445.9	431.8	437.7	417.9	443.4	468.3

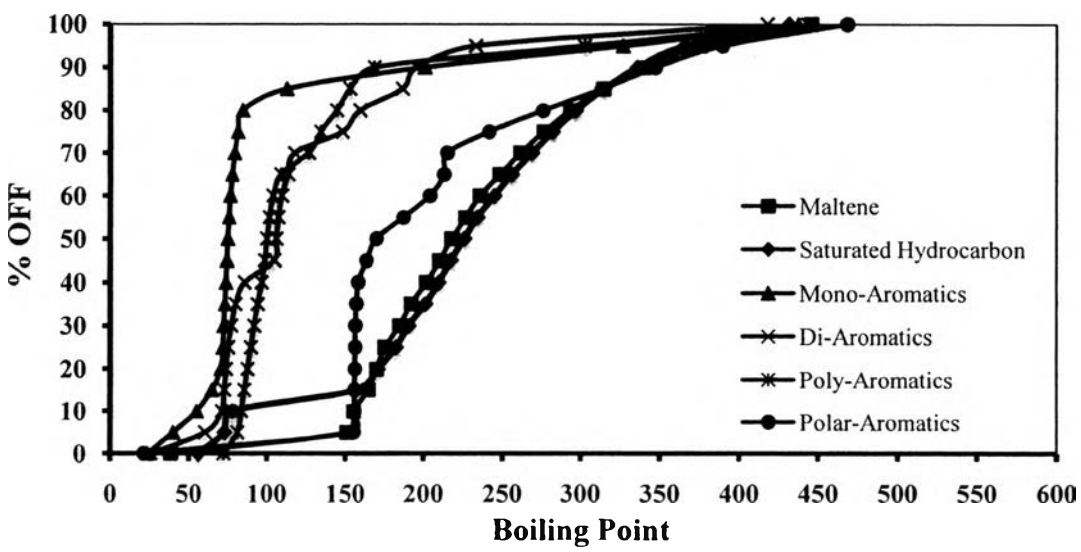

Figure D18 True boiling point distillation (°C) of physical mixture (Pt/Y + Pt/KL) at $Ø_{Pt/KL}$ = 0.25.

Table D19 Physical mixture (Pt/Y + Pt/KL) at $Ø_{Pt/KL}$ = 0.5

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	22.7	46.0	24.6	34.1	68.5	20.5
5	111.9	74.1	53.7	66.0	71.9	36.3
10	152.9	79.5	69.6	69.5	78.2	155.2
15	156.3	155.4	71.3	70.9	80.3	155.6
20	166.2	169.5	72.3	72.9	82.4	155.9
25	169.8	173.6	73.3	75.9	84.5	156.1
30	172.8	183.8	74.4	80.7	86.5	156.3
35	182.3	190.3	75.8	99.1	88.7	156.6
40	188.5	199.5	78.3	100.6	90.9	157.1
45	195.2	206.4	81.4	102.1	93.4	159.6
50	203.2	213.3	105.1	104.1	96.2	165.4
55	211.7	221.4	110.6	106.4	98.6	175.4
60	219.9	231.6	120.0	109.3	100.1	194.1
65	229.9	242.6	157.9	118.1	102.2	203.4
70	242.9	256.0	170.4	149.6	105.5	211.0
75	258.9	271.6	180.3	157.3	114.4	213.7
80	277.1	288.2	189.9	170.4	134.3	230.8
85	298.7	309.2	204.4	186.2	148.6	266.4
90	325.2	333.1	239.1	197.3	159.4	308.3
95	361.8	366.8	357.8	245.7	263.6	353.3
100	438.7	439.8	454.0	436.4	437.7	452.3

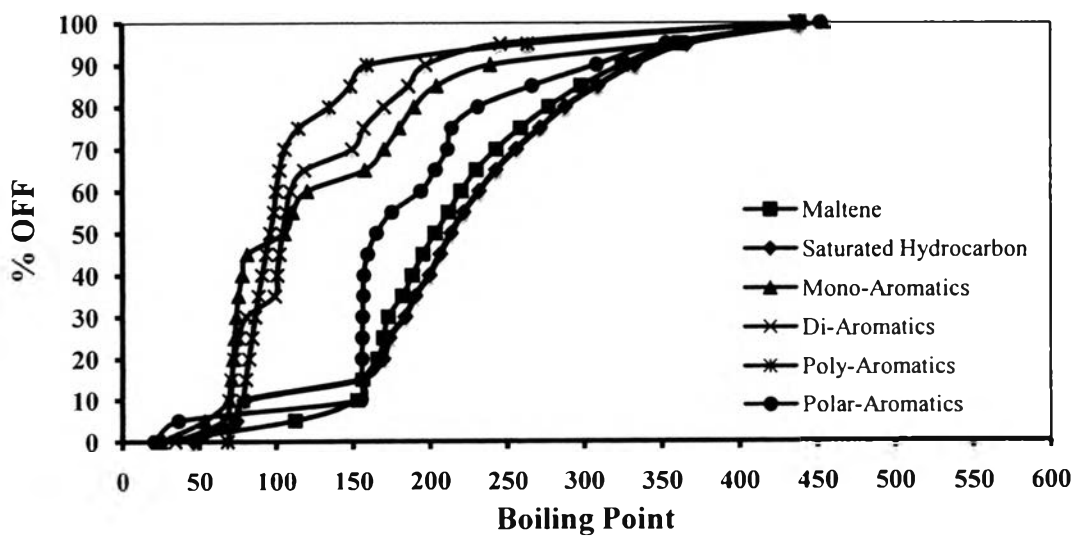

Figure D19 True boiling point distillation (°C) of physical mixture (Pt/Y + Pt/KL) at $Ø_{Pt/KL}$ = 0.5

Table D20 Physical mixture (Pt/Y + Pt/KL) at $Ø_{Pt/KL}$ = 0.75

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	26.7	57.9	23.5	32.6	69.7	22.2
5	149.4	74.5	52.6	66.4	73.2	155.6
10	156.1	154.6	70.8	69.7	81.6	156.2
15	167.1	171.3	74.2	71.2	84.0	157.1
20	170.8	183.9	75.7	73.1	86.4	159.8
25	180.6	192.2	77.2	76.4	88.5	171.5
30	188.1	202.8	78.6	82.1	90.6	196.6
35	195.9	211.0	81.0	100.5	92.9	206.4
40	204.4	218.4	85.6	102.1	95.4	213.2
45	212.4	226.5	112.0	104.1	97.9	213.7
50	220.4	233.9	121.3	107.0	99.0	214.5
55	229.0	243.9	157.3	110.3	100.3	229.3
60	237.7	253.5	168.6	129.0	101.9	253.9
65	249.0	264.2	171.7	153.4	104.1	277.7
70	260.6	275.2	180.7	163.1	107.8	303.1
75	273.5	288.0	187.7	171.0	124.5	322.0
80	288.9	303.2	201.2	182.1	138.7	343.5
85	308.7	321.6	226.8	192.7	152.0	368.0
90	334.6	345.5	290.3	203.7	169.9	393.1
95	372.6	379.5	366.0	241.4	269.7	422.1
100	446.5	451.9	456.2	437.8	440.5	486.2

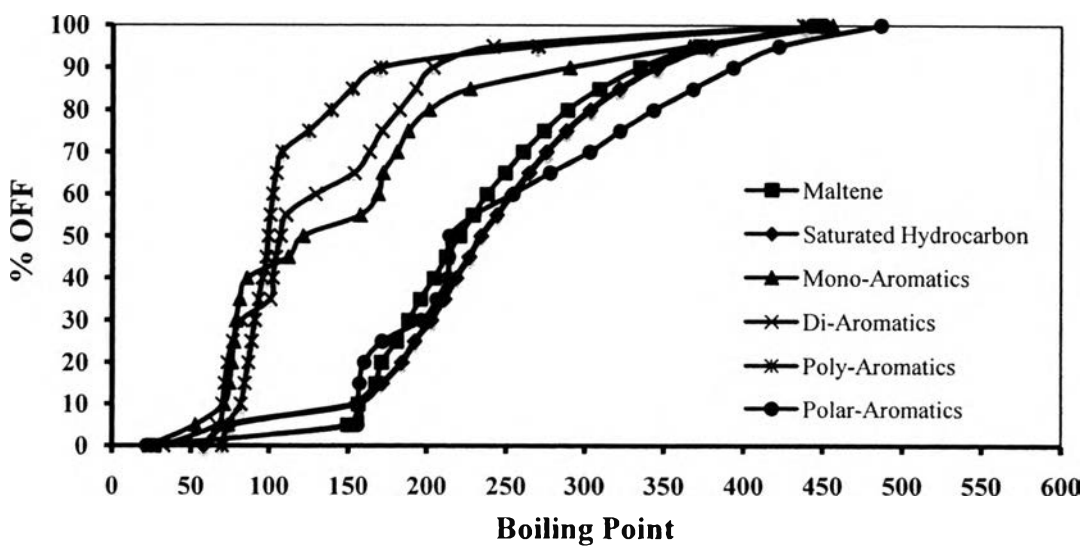

Figure D20 True boiling point distillation (°C) of physical mixture (Pt/Y + Pt/KL) at $Ø_{Pt/KL}$ = 0.75.

Table D21 Packing sequence (Pt/Y ---> Pt/KL) at $Ø_{Pt/KL}$ = 0.25

% OFF	Boiling Point					
	Maltene	**Saturated Hydrocarbon**	**Mono-Aromatics**	**Di-Aromatics**	**Poly-Aromatics**	**Polar-Aromatics**
0	30.7	47.3	23.5	25.4	57.3	20.8
5	151.0	70.0	44.3	59.6	62.8	130.2
10	156.5	72.6	56.9	69.8	69.4	154.9
15	168.5	76.9	67.5	71.0	70.9	155.4
20	172.3	155.3	70.6	72.1	72.6	155.8
25	184.2	171.5	71.4	73.4	74.4	156.0
30	192.6	184.9	72.3	75.3	76.1	156.3
35	203.2	197.7	72.9	78.0	77.9	156.5
40	212.5	208.8	73.6	81.6	79.9	156.8
45	221.4	218.0	74.5	100.4	82.1	158.3
50	231.0	228.4	75.4	102.3	84.6	166.5
55	241.5	238.2	76.7	103.4	87.5	191.5
60	252.4	250.2	78.6	104.8	91.0	195.1
65	264.1	261.9	81.0	106.7	95.5	203.1
70	275.8	273.6	84.5	109.1	99.4	210.1
75	289.3	286.8	109.9	111.6	103.4	222.0
80	305.4	302.3	118.4	118.0	119.7	257.5
85	324.9	320.6	169.6	149.3	130.9	296.2
90	349.8	344.0	208.1	173.6	143.6	336.8
95	382.7	376.5	320.1	275.4	158.7	385.1
100	445.4	499.2	646.4	444.9	406.6	465.2

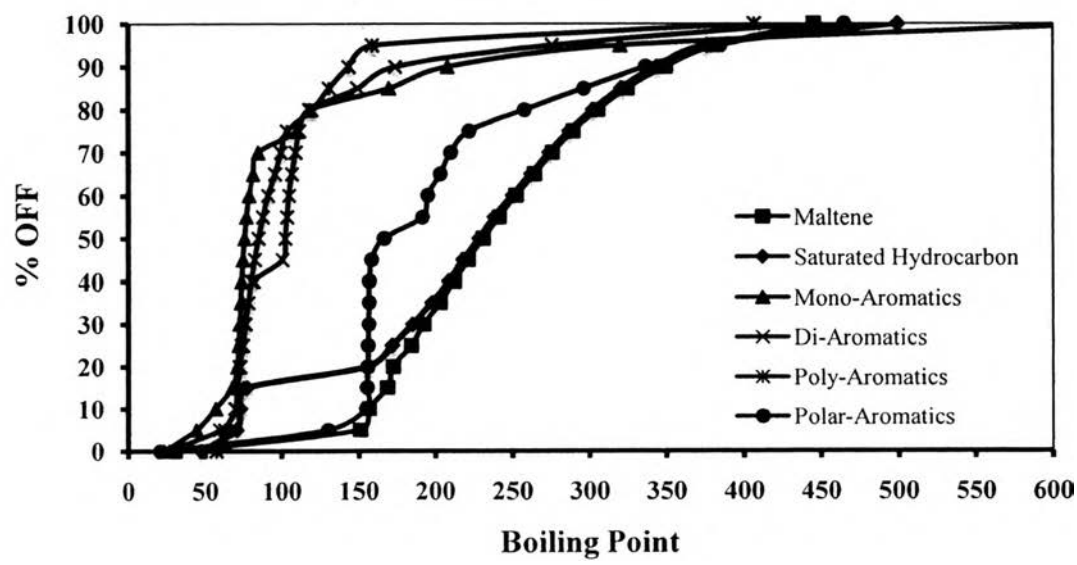

Figure D21 True boiling point distillation (°C) of packing sequence (Pt/Y ---> Pt/KL) at $Ø_{Pt/KL}$ = 0.25.

Table D22 Packing sequence (Pt/Y ---> Pt/KL) at $Ø_{Pt/KL}$ = 0.5

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	23.9	54.9	23.3	29.0	70.6	21.0
5	135.2	72.2	34.8	70.7	75.1	38.6
10	154.0	76.7	53.5	73.2	82.7	115.9
15	161.4	157.3	64.3	75.2	85.2	156.6
20	169.4	171.6	70.6	78.7	87.3	157.6
25	173.1	183.4	72.6	100.7	89.3	159.6
30	183.3	191.3	73.7	105.6	91.6	168.2
35	190.3	201.7	74.5	107.9	93.9	185.4
40	200.0	210.3	75.3	112.8	96.3	203.8
45	207.8	217.9	76.1	120.9	98.4	212.7
50	215.3	226.6	76.8	154.5	99.6	214.2
55	224.7	235.4	77.6	160.7	101.1	224.5
60	234.4	247.3	78.5	169.5	103.1	244.2
65	247.5	259.2	79.9	171.8	106.4	265.2
70	261.4	271.8	82.1	179.7	115.0	285.5
75	276.5	285.5	85.2	184.8	134.2	306.2
80	293.8	301.6	113.7	191.5	147.0	326.0
85	314.9	320.0	182.3	199.5	155.2	349.9
90	340.1	341.7	239.9	211.5	172.7	377.4
95	374.9	372.4	348.6	236.8	250.0	410.6
100	438.6	438.3	446.9	420.7	439.9	480.7

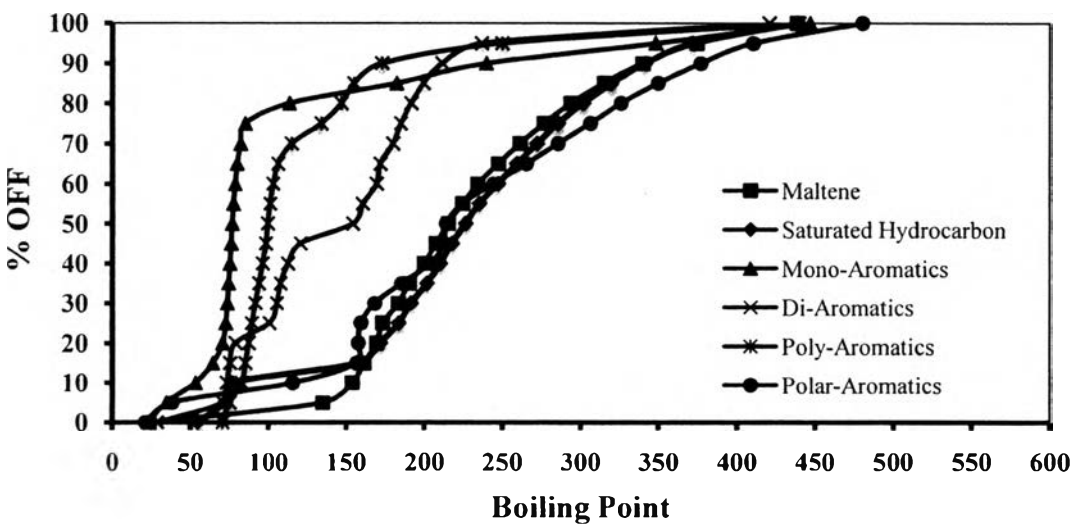

Figure D22 True boiling point distillation (°C) of packing sequence (Pt/Y ---> Pt/KL) at $Ø_{Pt/KL}$ = 0.5.

Table D23 Packing sequence (Pt/Y ---> Pt/KL) at $Ø_{Pt/KL}$ = 0.75

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	34.6	59.0	23.5	24.2	52.8	23.1
5	117.6	74.2	43.5	54.1	77.3	83.1
10	153.8	111.6	57.1	71.1	93.1	138.5
15	157.4	169.6	68.3	74.2	96.4	157.3
20	167.7	181.1	71.3	75.5	98.4	159.0
25	170.9	189.9	72.4	77.0	99.1	167.2
30	180.1	200.7	73.2	78.3	99.9	194.4
35	187.4	208.9	73.9	80.3	100.7	205.0
40	195.7	216.3	74.6	83.1	101.8	212.9
45	204.2	224.4	75.4	103.9	103.0	213.4
50	213.1	233.1	76.1	107.6	104.0	214.5
55	221.7	244.0	77.2	108.6	105.3	223.7
60	231.9	255.1	78.6	109.5	106.9	244.4
65	244.4	267.8	80.6	110.8	109.3	266.4
70	259.1	279.6	83.1	112.8	115.3	287.2
75	274.7	292.6	105.6	117.0	136.3	306.7
80	292.0	308.2	111.7	119.9	148.5	325.1
85	313.0	324.6	120.2	148.6	154.9	347.1
90	337.4	344.2	207.9	159.6	173.0	372.6
95	371.9	372.8	315.4	302.5	342.9	407.7
100	441.9	438.0	454.0	455.0	451.4	481.5

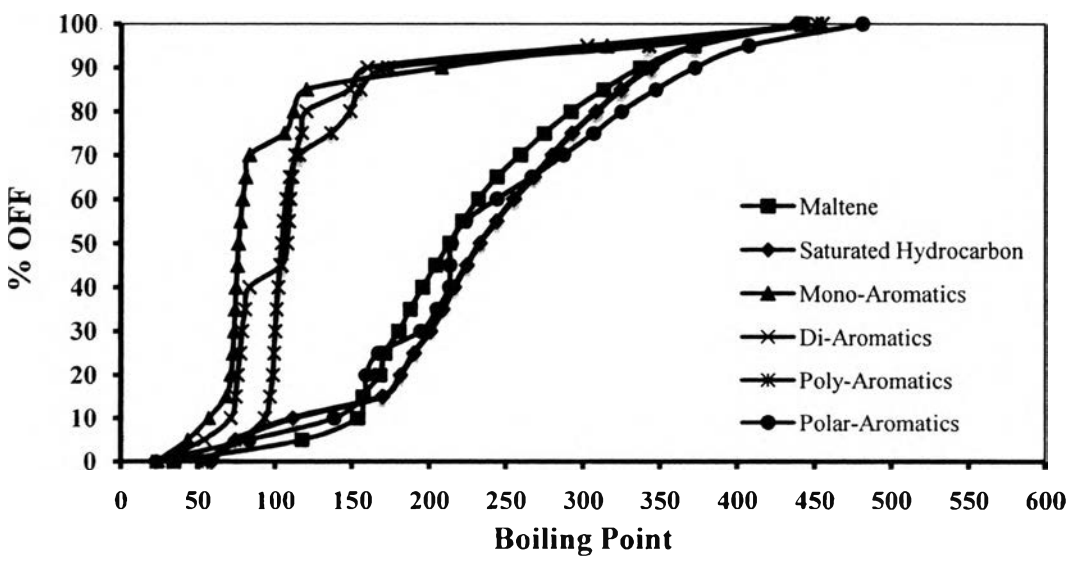

Figure D23 True boiling point distillation (°C) of packing sequence (Pt/Y ---> Pt/KL) at $Ø_{Pt/KL}$ = 0.75.

Table D24 Packing sequence (Pt/KL ---> Pt/Y) at $Ø_{Pt/KL}$ = 0.25

% OFF	Boiling Point					
	Maltene	**Saturated Hydrocarbon**	**Mono-Aromatics**	**Di-Aromatics**	**Poly-Aromatics**	**Polar-Aromatics**
0	24.8	60.9	23.1	23.3	66.2	22.7
5	112.0	75.4	37.7	35.6	77.5	75.2
10	152.7	154.4	71.9	76.9	90.2	156.6
15	156.4	169.9	75.6	82.7	92.9	157.5
20	166.9	180.8	77.3	110.9	95.1	159.1
25	170.3	189.2	79.2	113.4	97.0	166.0
30	177.7	199.5	81.3	120.8	98.4	186.3
35	185.7	207.3	84.7	157.8	99.1	204.0
40	193.4	213.7	110.6	173.9	100.0	212.4
45	203.1	222.2	112.7	189.1	101.1	213.0
50	212.1	230.8	118.2	197.8	102.0	213.6
55	220.7	241.0	151.0	203.0	103.0	215.4
60	230.6	251.9	169.0	209.1	104.3	227.6
65	242.5	263.8	177.7	219.7	106.0	245.0
70	256.0	275.6	190.8	234.2	108.5	264.7
75	271.8	288.7	206.7	255.2	114.4	284.1
80	288.4	303.9	242.8	283.1	133.8	304.8
85	309.1	320.7	301.5	314.5	144.4	328.9
90	334.0	340.8	349.9	353.9	153.7	358.2
95	369.2	369.4	393.3	399.1	168.1	396.3
100	444.0	434.8	467.0	467.8	401.6	466.0

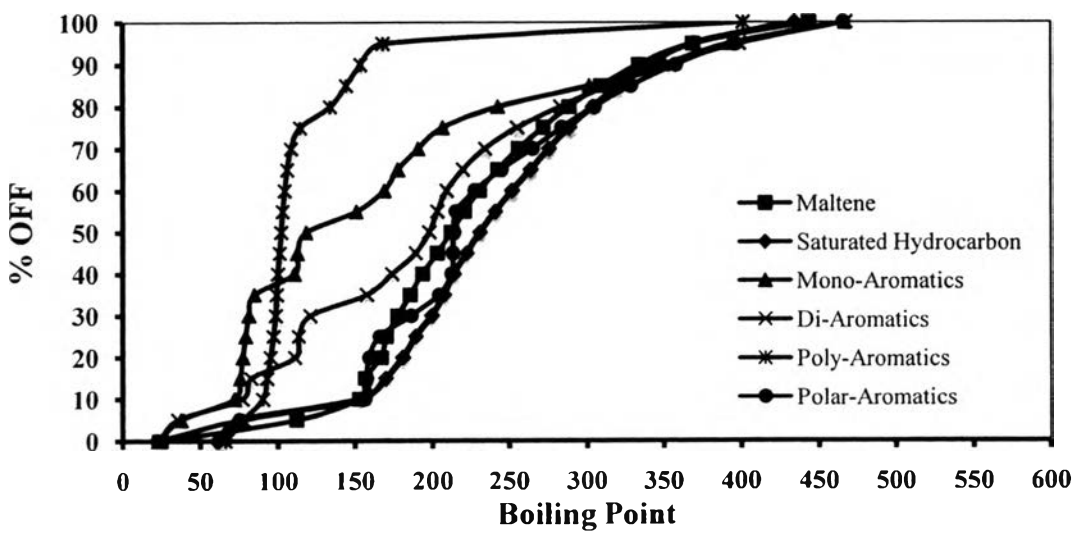

Figure D24 True boiling point distillation (°C) of packing sequence (Pt/KL ---> Pt/Y) at $Ø_{Pt/KL}$ = 0.25.

Table D25 Packing sequence (Pt/KL ---> Pt/Y) at $Ø_{Pt/KL}$ = 0.5

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	25.4	55.4	23.3	24.4	71.6	21.8
5	113.4	70.0	39.2	56.4	80.4	133.2
10	153.7	72.8	56.4	71.6	97.9	155.6
15	157.2	80.2	67.3	73.5	99.2	156.0
20	167.5	165.6	71.3	74.9	100.1	156.5
25	170.6	175.1	72.6	76.2	101.2	157.4
30	178.5	187.7	73.4	78.0	102.6	159.3
35	185.6	198.8	74.1	80.9	104.2	168.7
40	193.1	207.8	74.8	85.3	105.8	194.6
45	203.1	215.8	75.5	105.9	108.2	204.5
50	212.1	224.8	76.3	107.3	113.2	213.0
55	220.9	234.0	77.2	108.8	134.3	214.0
60	231.0	245.8	78.5	111.1	149.6	227.5
65	243.3	258.1	80.5	115.5	157.6	254.0
70	257.4	270.9	83.0	121.2	203.1	283.6
75	273.4	284.4	101.8	154.7	241.7	311.4
80	291.5	300.5	112.1	160.6	317.2	335.8
85	314.1	319.3	122.2	171.7	364.1	360.8
90	341.2	342.3	203.6	187.8	393.8	387.9
95	378.3	375.7	336.3	210.6	421.8	416.6
100	452.0	450.0	447.2	411.1	480.8	479.9

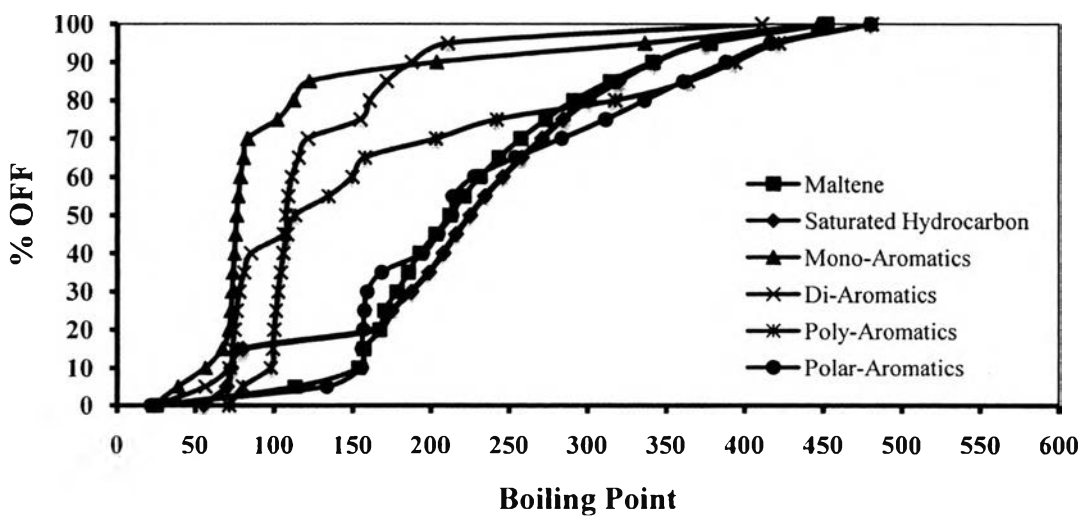

Figure D25 True boiling point distillation (°C) of packing sequence (Pt/KL ---> Pt/Y) at $Ø_{Pt/KL}$ = 0.5.

Table D26 Packing sequence (Pt/KL ---> Pt/Y) at $Ø_{Pt/KL}$ = 0.75

% OFF	Boiling Point					
	Maltene	Saturated Hydrocarbon	Mono-Aromatics	Di-Aromatics	Poly-Aromatics	Polar-Aromatics
0	32.9	63.0	23.3	34.1	69.3	21.0
5	118.4	70.8	38.6	60.3	72.5	130.6
10	153.9	76.9	56.2	63.9	79.1	155.2
15	157.3	154.4	67.3	66.8	81.3	155.6
20	167.5	168.4	71.4	69.5	83.4	155.9
25	170.5	173.5	72.8	71.3	85.4	156.1
30	176.9	183.4	73.5	74.1	87.5	156.3
35	185.2	191.4	74.3	77.8	89.6	156.5
40	192.1	201.3	75.1	93.5	91.8	156.9
45	202.2	210.5	75.8	97.9	94.1	158.8
50	210.5	218.7	76.7	99.2	96.7	170.1
55	219.0	228.8	77.6	100.7	98.7	192.6
60	228.9	241.0	79.1	102.6	100.1	203.0
65	240.5	253.8	81.4	104.5	101.9	210.5
70	255.0	268.0	84.2	107.4	104.6	213.3
75	271.0	281.7	108.4	115.6	110.6	224.0
80	287.0	297.7	112.5	145.9	131.9	253.8
85	307.9	316.8	124.0	159.6	144.8	291.0
90	332.6	339.4	224.9	187.8	155.9	331.8
95	367.9	372.2	338.1	215.3	235.4	383.7
100	440.3	438.1	455.6	428.4	435.3	468.0

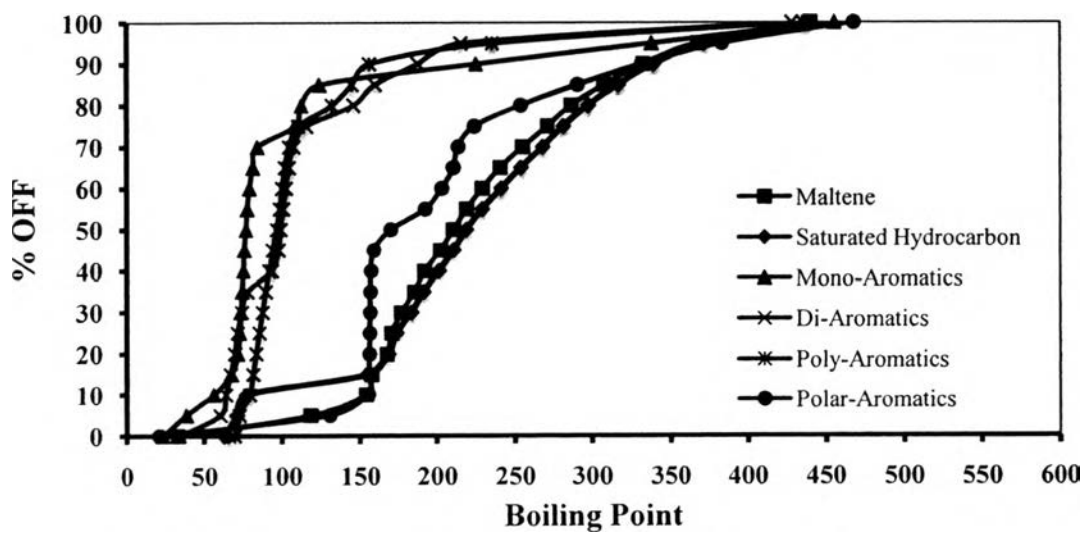

Figure D26 True boiling point distillation (°C) of packing sequence (Pt/KL ---> Pt/Y) at $Ø_{Pt/KL}$ = 0.75.

E. Chemical Compositions of Maltenes

Table E1 Effects of KL, Y and platinum-supported catalysts

	Non-Catalyst	Y	KL	Pt/Y	Pt/KL
Saturated HCs	47.00	54.48	53.10	55.44	55.51
Mono-aromatics	15.60	15.01	12.00	14.92	17.46
Di-aromatics	9.73	8.96	8.72	11.29	12.02
Poly-aromatics	9.69	9.20	8.07	8.27	8.42
Polar-aromatics	15.91	12.11	15.71	7.66	5.01

Table E2 Effects of physical mixtures and platinum-supported catalysts

	Y + KL			Pt/Y + Pt/KL		
	$Ø_{KL} = 0.25$	$Ø_{KL} = 0.5$	$Ø_{KL} = 0.75$	$Ø_{Pt/KL} = 0.25$	$Ø_{Pt/KL} = 0.5$	$Ø_{Pt/KL} = 0.75$
Saturated HCs	67.87	62.15	59.95	69.68	67.99	67.30
Mono-aromatics	9.73	11.74	11.22	16.74	9.24	10.74
Di-aromatics	5.66	6.68	8.42	8.26	8.23	6.68
Poly-aromatics	9.05	11.54	14.54	3.12	5.94	5.73
Polar-aromatics	4.53	4.86	4.85	1.84	5.54	2.86

Table E3 Effects of packing sequence (Y ---> KL) and platinum-supported catalysts

	Y ---> KL			Pt/Y ---> Pt/KL		
	$Ø_{KL} = 0.25$	$Ø_{KL} = 0.5$	$Ø_{KL} = 0.75$	$Ø_{Pt/KL} = 0.25$	$Ø_{Pt/KL} = 0.5$	$Ø_{Pt/KL} = 0.75$
Saturated HCs	60.93	53.04	54.35	70.96	76.08	68.49
Mono-aromatics	12.10	14.61	15.39	12.02	8.37	12.72
Di-aromatics	9.13	8.45	8.83	7.21	7.18	9.13
Poly-aromatics	12.10	14.40	15.79	4.86	6.46	7.77
Polar-aromatics	5.31	8.03	4.65	2.89	1.44	0.98

Table E4 Effects of packing sequence (KL ---> Y) and platinum-supported catalysts

	KL ---> Y			Pt/KL --->Pt/ Y		
	$Ø_{KL} = 0.25$	$Ø_{KL} = 0.5$	$Ø_{KL} = 0.75$	$Ø_{Pt/KL} = 0.25$	$Ø_{Pt/KL} = 0.5$	$Ø_{Pt/KL} = 0.75$
Saturated HCs	52.24	43.69	49.03	76.21	69.14	59.32
Mono-aromatics	13.82	18.24	17.73	7.14	11.38	13.35
Di-aromatics	6.91	7.42	7.20	5.45	9.66	16.05
Poly-aromatics	16.46	19.24	16.62	10.36	7.67	8.42
Polar-aromatics	7.52	7.01	6.93	0.31	1.88	0.42

F. Carbon Number Distribution of Maltenes

Table F1 Influences of various zeolites

No. Carbon	Non-Catalst	Y	KL	Pt/Y	Pt/KL
5	0.000	0.000	0.000	0.000	0.000
6	0.002	0.000	0.001	0.022	0.000
7	0.083	0.028	0.032	0.677	0.094
8	0.827	0.864	0.450	4.161	2.105
9	3.155	5.063	2.716	10.069	9.187
10	6.616	11.556	7.959	14.246	16.362
11	9.559	15.464	13.547	14.867	17.997
12	10.958	15.379	15.917	13.086	15.389
13	10.880	13.004	14.812	10.490	11.582
14	9.885	10.083	12.014	8.005	8.198
15	8.508	7.482	9.030	5.966	5.656
16	7.090	5.446	6.530	4.407	3.877
17	5.803	3.942	4.645	3.257	2.669
18	4.707	2.860	3.293	2.419	1.855
19	3.806	2.090	2.344	1.811	1.305
20	3.080	1.542	1.682	1.369	0.930
21	2.500	1.149	1.219	1.045	0.673
22	2.039	0.866	0.894	0.807	0.493
23	1.672	0.660	0.663	0.629	0.366
24	1.379	0.508	0.497	0.495	0.275
25	1.145	0.395	0.377	0.394	0.209
26	0.956	0.311	0.289	0.316	0.161
27	0.802	0.246	0.224	0.255	0.125
28	0.677	0.196	0.174	0.208	0.098
29	0.575	0.158	0.137	0.170	0.077
30	0.490	0.128	0.109	0.140	0.061
31	0.419	0.104	0.087	0.116	0.049
32	0.360	0.085	0.069	0.097	0.040
33	0.310	0.070	0.056	0.081	0.032
34	0.267	0.058	0.045	0.068	0.026
35	0.231	0.048	0.037	0.057	0.021
36	0.200	0.040	0.030	0.048	0.017
37	0.173	0.033	0.025	0.041	0.014
38	0.150	0.028	0.020	0.034	0.012
39	0.129	0.023	0.016	0.029	0.010
40	0.112	0.019	0.014	0.025	0.008
41	0.096	0.016	0.011	0.021	0.006
42	0.082	0.013	0.009	0.017	0.005
43	0.070	0.011	0.007	0.014	0.004
44	0.058	0.009	0.006	0.012	0.004
45	0.048	0.007	0.005	0.010	0.003
46	0.038	0.006	0.004	0.008	0.002
47	0.029	0.004	0.003	0.006	0.002
48	0.021	0.003	0.002	0.004	0.001
49	0.012	0.002	0.001	0.002	0.001
50	0.002	0.000	0.000	0.000	0.000

Table F2 Influences of physical mixtures (Y + KL) and corresponding platinum-supported beds (Pt/Y + Pt/KL)

No. Carbon	Y + KL			Pt/Y + Pt/KL		
	$Ø_{KL}$ = 0.25	$Ø_{KL}$ = 0.5	$Ø_{KL}$ = 0.75	$Ø_{Pt/KL}$ = 0.25	$Ø_{Pt/KL}$ = 0.5	$Ø_{Pt/KL}$ = 0.75
5	0.000	0.000	0.000	0.000	0.000	0.000
6	0.002	0.006	0.001	0.016	0.004	0.007
7	0.219	0.268	0.178	0.473	0.315	0.300
8	2.418	2.190	2.692	3.038	3.186	2.390
9	8.065	6.656	9.765	7.936	9.733	7.085
10	13.541	11.233	16.088	12.183	15.124	11.695
11	15.419	13.409	17.268	13.705	16.164	13.706
12	14.143	13.079	14.774	12.872	14.095	13.169
13	11.524	11.350	11.245	10.903	11.031	11.290
14	8.819	9.218	8.084	8.717	8.172	9.079
15	6.543	7.222	5.671	6.758	5.904	7.055
16	4.794	5.559	3.953	5.166	4.231	5.393
17	3.507	4.251	2.764	3.932	3.036	4.100
18	2.576	3.251	1.950	2.997	2.194	3.119
19	1.907	2.496	1.391	2.297	1.601	2.385
20	1.425	1.930	1.005	1.773	1.181	1.836
21	1.077	1.503	0.736	1.380	0.881	1.426
22	0.822	1.181	0.546	1.084	0.666	1.117
23	0.634	0.936	0.410	0.859	0.509	0.882
24	0.494	0.749	0.311	0.687	0.393	0.704
25	0.389	0.604	0.239	0.554	0.306	0.566
26	0.309	0.490	0.186	0.450	0.241	0.459
27	0.248	0.401	0.145	0.368	0.192	0.375
28	0.200	0.331	0.115	0.304	0.154	0.308
29	0.163	0.274	0.091	0.252	0.124	0.255
30	0.133	0.229	0.073	0.210	0.101	0.212
31	0.109	0.192	0.059	0.176	0.082	0.177
32	0.090	0.161	0.048	0.148	0.068	0.149
33	0.075	0.136	0.039	0.125	0.056	0.126
34	0.062	0.115	0.032	0.106	0.046	0.106
35	0.052	0.098	0.026	0.090	0.038	0.090
36	0.044	0.083	0.022	0.077	0.032	0.076
37	0.037	0.071	0.018	0.065	0.027	0.065
38	0.031	0.060	0.015	0.056	0.022	0.055
39	0.026	0.051	0.012	0.047	0.019	0.047
40	0.022	0.044	0.010	0.040	0.016	0.040
41	0.018	0.037	0.008	0.034	0.013	0.034
42	0.015	0.031	0.007	0.029	0.011	0.029
43	0.013	0.026	0.006	0.024	0.009	0.024
44	0.010	0.022	0.005	0.020	0.007	0.020
45	0.008	0.018	0.004	0.016	0.006	0.016
46	0.007	0.014	0.003	0.013	0.005	0.013
47	0.005	0.011	0.002	0.010	0.003	0.010
48	0.003	0.007	0.001	0.007	0.002	0.007
49	0.002	0.004	0.001	0.004	0.001	0.004
50	0.000	0.001	0.000	0.001	0.000	0.001

Table F3 Influences of packing sequence (Y ---> KL) and corresponding platinum-supported beds (Pt/Y ---> Pt/KL)

No. Carbon	Y ---> KL			Pt/Y ---> Pt/KL		
	$Ø_{KL} = 0.25$	$Ø_{KL} = 0.5$	$Ø_{KL} = 0.75$	$Ø_{Pt/KL} = 0.25$	$Ø_{Pt/KL} = 0.5$	$Ø_{Pt/KL} = 0.75$
5	0.001	0.000	0.000	0.001	0.000	0.000
6	0.059	0.000	0.028	0.045	0.038	0.046
7	0.882	0.029	0.633	0.609	0.721	0.806
8	3.938	0.750	3.483	2.761	3.652	3.902
9	8.520	4.247	8.359	6.358	8.414	8.731
10	11.945	9.933	12.275	9.634	12.137	12.353
11	12.944	13.921	13.512	11.280	13.283	13.347
12	12.047	14.561	12.575	11.273	12.367	12.319
13	10.261	12.911	10.625	10.227	10.486	10.383
14	8.309	10.444	8.505	8.751	8.434	8.315
15	6.548	8.044	6.615	7.235	6.595	6.482
16	5.093	6.048	5.077	5.870	5.089	4.991
17	3.945	4.504	3.881	4.718	3.912	3.829
18	3.059	3.352	2.973	3.782	3.011	2.943
19	2.384	2.506	2.289	3.035	2.329	2.275
20	1.869	1.887	1.775	2.444	1.814	1.770
21	1.477	1.433	1.387	1.979	1.425	1.389
22	1.177	1.099	1.094	1.612	1.128	1.099
23	0.945	0.851	0.871	1.322	0.901	0.877
24	0.766	0.666	0.699	1.091	0.726	0.706
25	0.625	0.525	0.565	0.907	0.589	0.573
26	0.514	0.418	0.461	0.758	0.482	0.469
27	0.426	0.335	0.379	0.638	0.397	0.386
28	0.355	0.271	0.313	0.540	0.330	0.320
29	0.297	0.221	0.261	0.459	0.275	0.267
30	0.250	0.181	0.218	0.392	0.231	0.224
31	0.212	0.149	0.183	0.336	0.195	0.189
32	0.180	0.123	0.155	0.290	0.165	0.160
33	0.154	0.102	0.131	0.250	0.140	0.136
34	0.131	0.085	0.111	0.216	0.119	0.116
35	0.113	0.071	0.095	0.187	0.102	0.099
36	0.097	0.060	0.081	0.163	0.087	0.084
37	0.083	0.050	0.069	0.141	0.074	0.072
38	0.071	0.042	0.059	0.122	0.064	0.062
39	0.061	0.035	0.050	0.106	0.055	0.053
40	0.052	0.030	0.043	0.092	0.047	0.045
41	0.045	0.025	0.037	0.079	0.040	0.038
42	0.038	0.021	0.031	0.068	0.034	0.033
43	0.032	0.017	0.026	0.058	0.028	0.027
44	0.027	0.014	0.022	0.048	0.024	0.023
45	0.022	0.011	0.018	0.040	0.019	0.019
46	0.017	0.009	0.014	0.032	0.015	0.015
47	0.013	0.007	0.011	0.024	0.012	0.011
48	0.009	0.005	0.007	0.017	0.008	0.008
49	0.005	0.003	0.004	0.010	0.005	0.004
50	0.001	0.001	0.001	0.002	0.001	0.001

Table F4 Influences of packing sequence (KL ---> Y) and corresponding platinum-supported beds (Pt/KL ---> Pt/Y)

No. Carbon	KL ---> Y			Pt/KL --->Pt/ Y		
	$Ø_{KL} = 0.25$	$Ø_{KL} = 0.5$	$Ø_{KL} = 0.75$	$Ø_{Pt/KL} = 0.25$	$Ø_{Pt/KL} = 0.5$	$Ø_{Pt/KL} = 0.75$
5	0.000	0.000	0.001	0.000	0.000	0.000
6	0.032	0.003	0.076	0.041	0.041	0.033
7	0.666	0.158	0.969	0.783	0.787	0.729
8	3.524	1.417	4.014	3.923	3.953	3.914
9	8.314	4.799	8.396	8.888	8.954	9.112
10	12.136	8.973	11.637	12.594	12.667	12.985
11	13.356	11.711	12.608	13.558	13.609	13.917
12	12.461	12.309	11.799	12.442	12.463	12.661
13	10.567	11.364	10.128	10.421	10.417	10.495
14	8.492	9.716	8.272	8.294	8.276	8.267
15	6.632	7.946	6.575	6.427	6.403	6.343
16	5.110	6.342	5.157	4.921	4.896	4.812
17	3.921	5.002	4.026	3.757	3.733	3.642
18	3.013	3.929	3.145	2.874	2.853	2.764
19	2.327	3.089	2.467	2.212	2.193	2.111
20	1.810	2.439	1.947	1.714	1.698	1.626
21	1.419	1.936	1.548	1.340	1.327	1.263
22	1.122	1.548	1.240	1.057	1.045	0.990
23	0.895	1.246	1.002	0.841	0.831	0.783
24	0.720	1.011	0.815	0.675	0.667	0.626
25	0.584	0.826	0.669	0.546	0.539	0.504
26	0.477	0.680	0.552	0.446	0.440	0.409
27	0.393	0.563	0.459	0.366	0.361	0.335
28	0.325	0.469	0.384	0.303	0.299	0.276
29	0.271	0.393	0.324	0.252	0.248	0.228
30	0.227	0.331	0.274	0.211	0.208	0.190
31	0.191	0.280	0.233	0.177	0.175	0.160
32	0.162	0.238	0.198	0.150	0.147	0.134
33	0.137	0.203	0.170	0.127	0.125	0.113
34	0.117	0.173	0.146	0.108	0.106	0.096
35	0.100	0.149	0.125	0.092	0.090	0.081
36	0.085	0.127	0.108	0.078	0.077	0.069
37	0.073	0.109	0.093	0.067	0.066	0.059
38	0.062	0.094	0.080	0.057	0.056	0.050
39	0.053	0.080	0.069	0.049	0.048	0.043
40	0.045	0.069	0.059	0.042	0.041	0.036
41	0.039	0.059	0.051	0.035	0.035	0.031
42	0.033	0.050	0.043	0.030	0.029	0.026
43	0.028	0.042	0.036	0.025	0.025	0.022
44	0.023	0.035	0.030	0.021	0.021	0.018
45	0.019	0.029	0.025	0.017	0.017	0.015
46	0.015	0.023	0.020	0.014	0.013	0.012
47	0.011	0.017	0.015	0.010	0.010	0.009
48	0.008	0.012	0.011	0.007	0.007	0.006
49	0.004	0.007	0.006	0.004	0.004	0.003
50	0.001	0.001	0.001	0.001	0.001	0.001

G. Petroleum Fractions of Derived Oils

Table G1 Effects of KL, Y and platinum-supported catalysts

	Non-Catalst	Y	KL	Pt/Y	Pt/KL
Naphtha	17.00	25.50	27.00	47.00	49.00
Kerosene	31.50	36.00	39.00	23.00	28.00
LGO	23.00	20.00	19.50	14.00	11.50
HGO	18.50	12.50	10.00	11.00	8.00
Long Residues	10.00	6.00	4.50	5.00	3.50

Table G2 Effects of physical mixtures and platinum-supported catalysts

	Y + KL			Pt/Y + Pt/KL		
	$Ø_{KL} = 0.25$	$Ø_{KL} = 0.5$	$Ø_{KL} = 0.75$	$Ø_{Pt/KL} = 0.25$	$Ø_{Pt/KL} = 0.5$	$Ø_{Pt/KL} = 0.75$
Naphtha	40.00	34.00	48.00	38.50	48.00	37.00
Kerosene	28.00	29.00	25.00	27.00	24.50	28.00
LGO	14.00	18.00	14.00	16.00	12.50	18.00
HGO	12.00	13.00	9.00	13.00	10.50	12.00
Long Residues	6.00	6.00	4.00	5.50	4.50	5.00

Table G3 Effects of packing sequence (Y ---> KL) and platinum-supported catalysts

	Y ---> KL			Pt/Y ---> Pt/KL		
	$Ø_{KL} = 0.25$	$Ø_{KL} = 0.5$	$Ø_{KL} = 0.75$	$Ø_{Pt/KL} = 0.25$	$Ø_{Pt/KL} = 0.5$	$Ø_{Pt/KL} = 0.75$
Naphtha	40.00	44.00	40.00	33.00	40.00	43.00
Kerosene	24.00	23.00	25.00	26.00	20.50	24.00
LGO	15.00	15.00	16.00	19.00	21.00	15.00
HGO	14.00	11.00	14.00	15.00	12.50	12.00
Long Residues	7.00	7.00	5.00	7.00	6.00	6.00

Table G4 Effects of packing sequence (KL ---> Y) and platinum-supported catalysts

	KL ---> Y			Pt/KL --->Pt/ Y		
	$Ø_{KL} = 0.25$	$Ø_{KL} = 0.5$	$Ø_{KL} = 0.75$	$Ø_{Pt/KL} = 0.25$	$Ø_{Pt/KL} = 0.5$	$Ø_{Pt/KL} = 0.75$
Naphtha	39.00	37.00	39.00	43.00	43.00	44.00
Kerosene	26.00	27.00	24.00	25.00	24.00	24.00
LGO	15.00	14.00	16.00	15.00	15.00	15.00
HGO	13.00	15.00	14.00	12.00	12.00	12.00
Long Residues	7.00	7.00	7.00	5.00	6.00	5.00

H. Asphaltenes

H1 Effects of non platinum-supported catalysts

Case		Asphsltenes (g/g oil)
Catalyst	**$Ø_{KL}$**	
Non-Catalyst	-	0.0007022750
Pure Y	**0.00**	0.0002964427
Physical Mixture (Y + KL)	**0.25**	0.0001581028
	0.50	0.0002564103
	0.75	0.0003303965
Packing Sequence (Y ---> KL)	**0.25**	0.0003734440
	0.50	0.0003162055
	0.75	0.0003353057
Packing Sequence (KL ---> Y)	**0.25**	0.0002783300
	0.50	0.0003149606
	0.75	0.0003400000
Pure KL	**1.00**	0.0003333333

H2 Effects of platinum-supported catalysts

Case		Asphsltenes (g/g oil)
Catalyst	**$Ø_{KL}$**	
Pt/Y	**0.00**	0.0000598802
Physical Mixture (Pt/Y + Pt/KL)	**0.25**	0.0001800000
	0.50	0.0002186879
	0.75	0.0002994012
Packing Sequence (Pt/Y ---> Pt/KL)	**0.25**	0.0002766798
	0.50	0.0001992032
	0.75	0.0001388889
Packing Sequence (Pt/KL ---> Pt/Y)	**0.25**	0.0001976285
	0.50	0.0001792829
	0.75	0.0001782178
Pt/KL	**1.00**	0.0002191235

CURRICULUM VITAE

Name: Ms. Mullika Phopaisarn

Date of Birth: May 23, 1984

Nationality: Thai

University Education:

2002-2006 Bachelor Degree of Science (Biotechnology), Faculty of Science, Mahidol University, Bangkok, Thailand

Working Experience:

2007-2008	Position:	Technical Sales Representative
	Company name:	Chemico Inter Corporation Co., Ltd.
2007-2006	Position:	Research and Development
	Company name:	Golden Line Business Co., Ltd. (Saha Farms Group).